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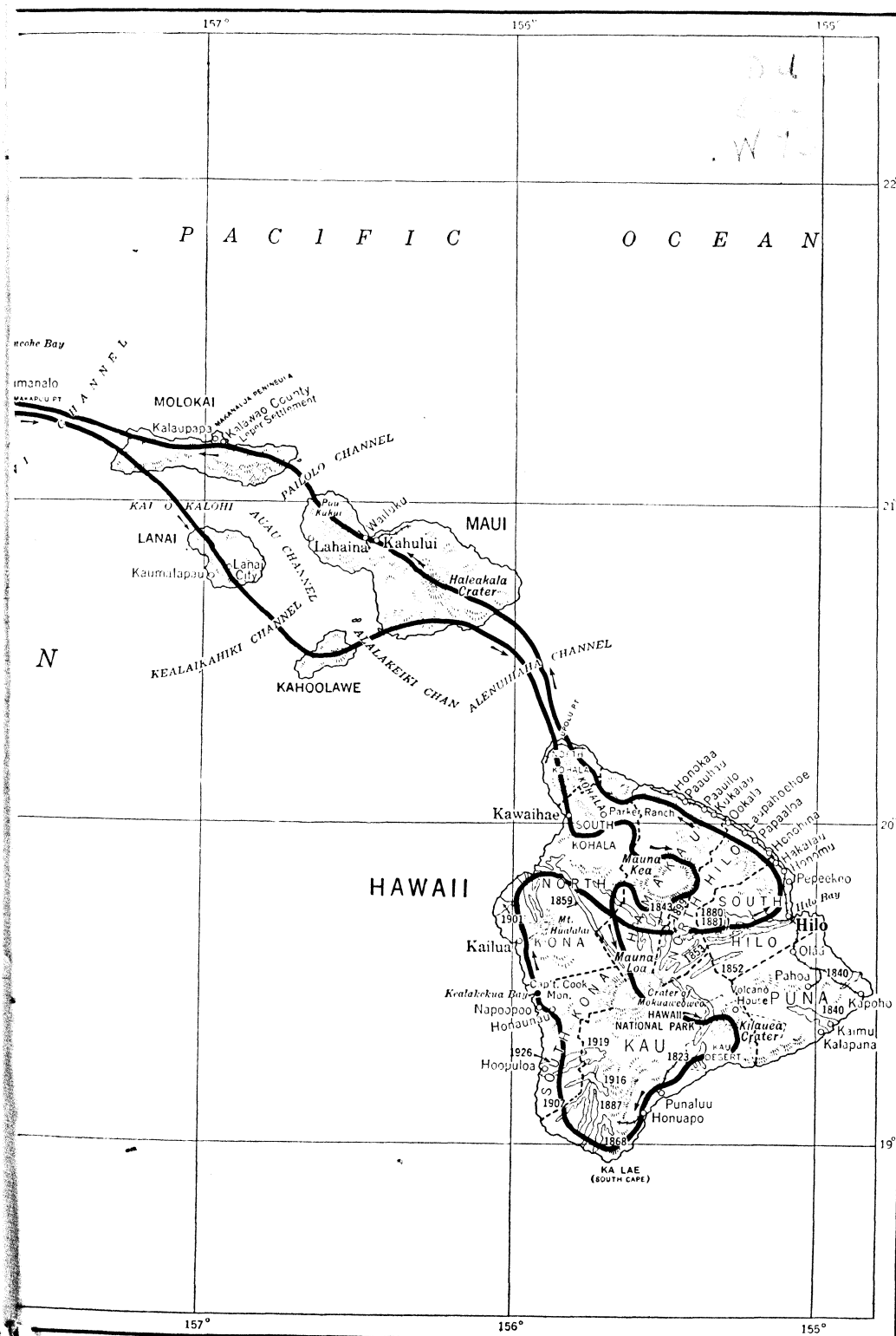
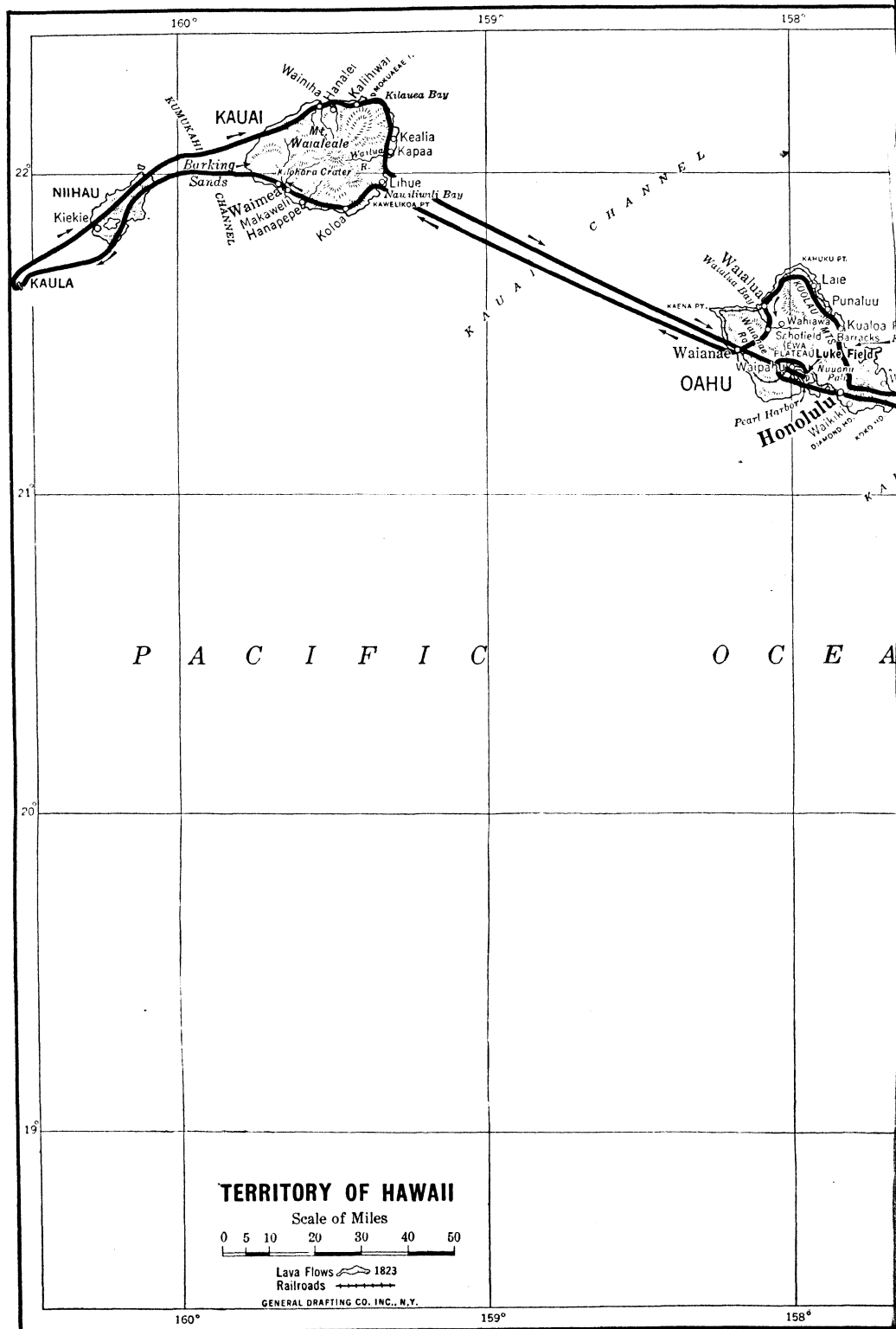
HAWAII TO-DAY

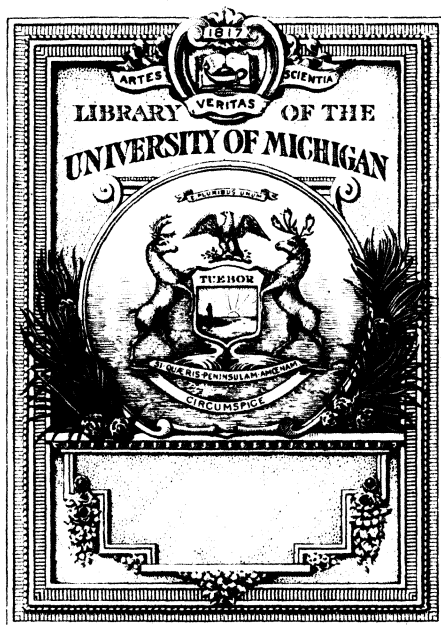
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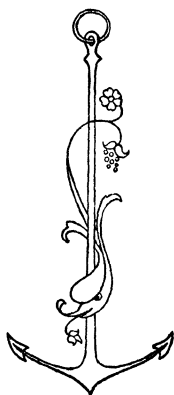


Lieut. R. C. Wriston, A.S., and his observer, Sergeant Richard Agnew, just after the first volcano flight.

HAWAII TO-DAY

BY

Lieut. R. C. WRISTON, A. S., U. S. A.



*WITH ILLUSTRATIONS
AND MAP*

GARDEN CITY NEW YORK
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FIRST EDITION

TO
ALFRED W. CARTER

WHOSE LIFETIME OF USEFUL
LABOUR AND WHOSE STEADY
PROGRESS AT AN AGE WHEN
THE MAJORITY LAY ASIDE
BUSINESS WORRIES ARE A
CONSTANT INSPIRATION TO
A YOUNGER GENERATION

FOREWORD

THE author of "Hawaii To-day" has made an enviable record as an officer in the Air Service and in his chosen specialty, Aerial Photography. He was publicly commended before troops and in orders for "services above and beyond the ordinary demands of duty" by Major General Charles P. Summerall, Department Commander. His flights on photographic missions have carried him to every section of the Islands. He made the first flight to Kilauea Volcano, the first flight by airplane to the Islands of Kahoolawe, Lanai, Niihau, and Kaula Rock, and still holds the record as the only man to have visited all the islands of the group by airplane. His studies in connection with his work eminently fit him for the task he has completed, and his work is heartily recommended to those interested in our island territory.

MASON M. PATRICK,
Major General, U. S. A.
Chief of Air Service.

PREFACE

It is with some hesitancy that I add my contribution to the books on Hawaii, many of which are excellent. I would forego this pleasure were it not for the fact that I am able, I believe, to present a new point of view, offering my readers a picture of Hawaii in its broader aspects—a Hawaii which cannot be fully appreciated until seen as I have seen it, by air.

When ordered to Hawaii, in April, 1923, I was not particularly pleased. I had been stationed at Fort Bliss, El Paso, Texas for less than a year, scarcely long enough, in fact, to build a photographic laboratory and get ready to pursue my chosen work, aerial photography. I had made several trips through New Mexico and into Arizona, and had planned more extensive excursions, both by air and by ground, through the territory of the ancient Pueblo Indians and the Grand Cañon. Always interested in antiquities, I had hoped for the opportunity to extend ground explorations in this field by aerial exploration and photography in the course of my other work.

Once in Hawaii, however, my interest was at once aroused. Here I found a people who, scarcely more than a century ago, were unknown to civilization. Their ancient temples, forts, and villages were still

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to be found and explored; the sons and daughters of Hawaiians of Captain Cook's day were still living, and through them much of interest might be learned.

My assignment as Commanding Officer of the 11th Photo Section, Air Service, permitted me, in the furtherance of my work, a greater freedom in aerial exploration than came to my brother officers of the Air Service; and, in fact, the requirements made of me in completely photographing the island of Oahu and all important and interesting sections on the other islands of the group insured my obtaining a knowledge of the topography of the entire group with a knowledge of location and aspect of all points of interest, ancient and modern, which is, I feel safe in saying, unequalled. In addition to the continual photographic flights made over the Territory, I have consistently tried to go everywhere and see everything by ground in the two years of my residence here. My study of the Territory by land, sea, and air has been supplemented and enriched from the first by study of all the standard histories on Hawaii and a host of other books, some good and some bad. With this preparation, it is my hope that the result set forth here will add something worth while to the books that have gone before.

The scheme of this book at least will be novel. I shall take the reader with me on an aerial journey, one which he will be able to take for himself in a very short time. Leaving the island of Oahu we shall travel first to Molokai, then among the islands, visiting Lanai, Kahoolawe, and eastern Maui in turn,

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on our way to the island of Hawaii. Our course on Hawaii will bring us first to the Parker Ranch, thence over the mountains Mauna Kea and Mauna Loa to Kilauea Volcano, from which point we shall take a clockwise direction around the island, again crossing the plain of the Parker Ranch to the windward coast, which we shall follow northwest toward Maui. We shall visit the windward side of each of the islands in turn until we reach Kauai, which we shall circle clockwise, making side trips from nearest points to Niihau and to Kaula Rock. Besides viewing each island from aloft, we shall occasionally land and make trips by car, by horse, or on foot, as becomes necessary, to gain a thorough and comprehensive knowledge of the Territory. It is my sincere hope that this journey will be as interesting to you as the many here compressed, have been to me.

Believing in the ancient Chinese proverb, that "One picture is worth ten thousand words," I am using many pictures, both aerial and ground, practically all of which I took alone or with the help of my aerial assistants. The aerial photographers, members of the 11th Photo Section, who aided in this work during the last two years were, successively: Sergeant Richard L. Agnew, Staff Sergeant Delmar H. Miller, Private Willard J. Watson, Specialist Sixth Class and Staff Sergeant Harry D. Tredway.

I acknowledge with gratitude the great assistance derived from "A Brief History of the Hawaiian People," by W. D. Alexander, "Hawaii, Past and Present," by William R. Castle, Jr., and a small

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guide book on the "Island of Hawaii," by Henry Walsworth Kinney, which last discovered for me that island's riches. This little booklet is to be highly recommended for those desiring detailed information in locating points of interest on Hawaii. A complete list of the books I have used will be found in the Bibliography.

R. C. WRISTON.

HAWAII, *August, 1925.*

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CHAPTER I

HAWAII THE BEAUTIFUL—FIRST IMPRESSIONS

OUR boat is nearing land. Soon we shall see for ourselves what kind of place this fabled land of Hawaii is. Already, from shipmates and from an occasional book of travel, perused to break the routine of a ship's day, we have discovered many things. We, of course, have always known the truth, but have been glad to inform several new-found friends that Hawaii is not a "possession" of the United States, but a territory, on the same status as Oklahoma was just a few years ago. Nor are our acquaintances any longer under the impression that Hawaii means simply Honolulu. They are beginning to suspect that if they wish to know Hawaii they have at least five islands to visit instead of one, as they had supposed.

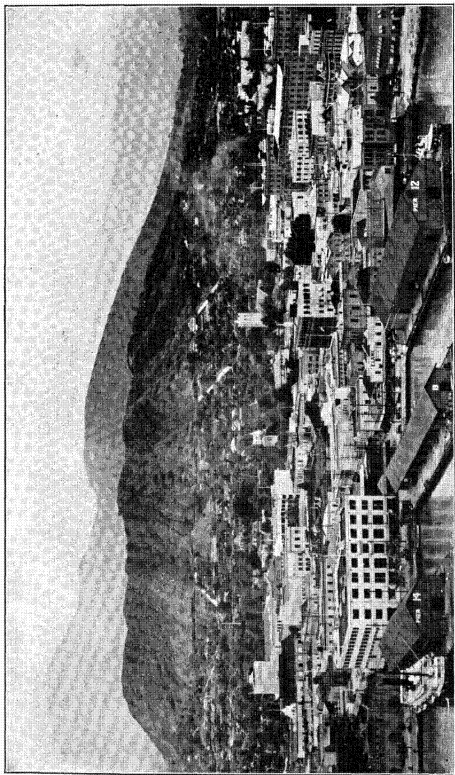
To our left—port, I should say—we can just make out a gray land form which emerges in a gradual climb from the water and disappears into the clouds. This, by consulting the map, we discover to be the island of Molokai. A few minutes later, to starboard

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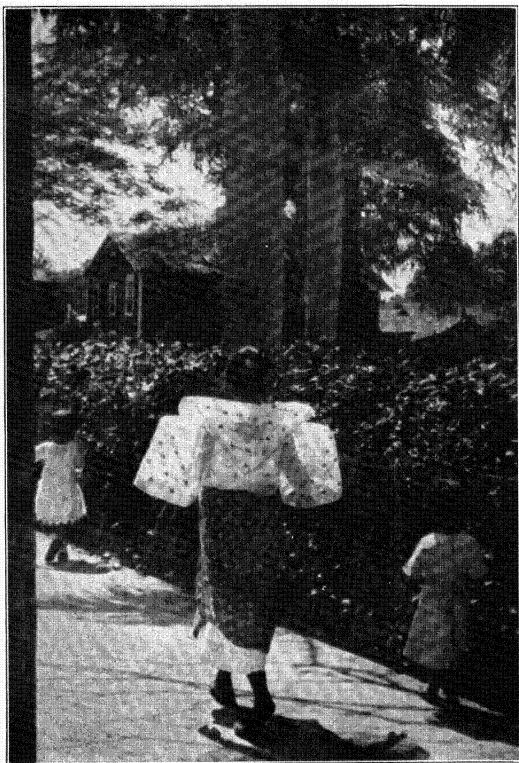
we discover another island, the first glimpse of Oahu, our present destination. As the image becomes more distinct we examine it with interest through the glasses. It does not appear very prepossessing; it seems to be merely a mass of rugged hills, more brown and red than green—desolate looking. We are slightly disappointed, expecting, as we had been, a dense tropical vegetation and many palm trees.

Much to our surprise, we do not dock on the near side of the island but pass through the Kaiwi Channel between Oahu and Molokai, for Honolulu Harbour is to leeward of the island. As we round the point by rugged Koko Crater, now extinct, and then by Koko Head, both very lightly covered with vegetation, our impression is more of a lower Arizona landscape than of a tropical one. But the liner ploughs swiftly to Diamond Head, that immense natural fortress, and our impressions change. Dense growths of trees and many charming houses cluster the slopes of the Head. We turn the corner, and before us lies the long expanse of waterfront leading through Waikiki to Honolulu Harbour entrance and on to Pearl Harbour. In the distance rise the dim blue mountains of the Waianae range; near at hand are the many palms, the beaches, the outrigger canoes, and the surfboard riders. Here is the Honolulu of our imagination!

We are surprised to find a city so large, and are further surprised later, on landing, to find it so modern. The ship heads for the harbour channel, which, after our several days travel on the boundless



Punch Bowl, an old volcanic crater, as seen from Honolulu Harbour, the business district of Honolulu appearing in the foreground.



A frequent sight in Honolulu, a Philippine woman wearing the costume of her race. The shirtwaist is known as a camisa and is made from piña, a cloth made from the pineapple fibre. The skirt is a straight piece of cloth, carefully draped to show the lace petticoat.

HAWAII THE BEAUTIFUL

deep, looks so small that one is inclined to question the Captain's ability to hit it. But he does, and we are soon easily and swiftly approaching the modern concrete wharves. Swimming natives surround the boat asking for the usual donation of coins. As a small shower of nickels, dimes, and larger pieces falls about them, we marvel at the dexterity with which each swimmer disappears into the depths, never failing to come up shortly with a coin in his fingers. After showing it, he caches it in his mouth and waits for further largess. A pleasant tingle of excitement pervades as the vessel is pulled gently to the dock and the gangplank falls. The band begins to play the haunting Hawaiian melodies, melodies we shall never forget; friends come aboard with flower *leis* ; and we feel that we are welcome indeed.

We arrange to have our trunks taken to the hotel, at Waikiki of course, but we must discover Honolulu for ourselves. We set out confidently from the wharf in what seems to be the direction of the centre of town, scorning to ask advice, lest any one of us be mistaken for a *malihine* (stranger). Already each of us feels he wants to belong and would not for worlds be considered as anything except a *kamaaina* (old-time resident). Unfortunately, we are not headed for the centre of town, but wander without noticing it along the waterfront, bringing up with surprise at the sampan harbour where the fishing fleet is anchored. Absorbed, we linger as the large tuna of one catch are thrown ashore accompanied by a running fire of conversation in Japanese. Across

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the way is the *Aala* market and we saunter over for a closer inspection of the finny tribe. The long marble counters are covered by fish of every description, fish we never imagined existed, much less believed that they could be used for food, fish with the most beautiful colours imaginable, deep blue, bright crimson, rainbow coloured, black with orange bands, ugly balloon fish, squids, and shell fish of many kinds.

As it is, perhaps, not wise to wander too far afield on our first walk we ask a big brown policeman the direction of the business district and set out again. We are in the Oriental section. Chinese ladies walk unconcernedly along in loose black pants and light blue or white coats fashioned much like pajamas. Occasionally one of the old régime goes by with tiny bound feet and a walk that is like a painful hobble. The men, for the most part, use Occidental garb, though occasionally an old man appears in the dress of his fathers. Japanese are present in great numbers, the women with their comfortable kimonos banded at the waist by brilliant obis. Occasionally, among the bright colours, one glimpses a Filipino with her remarkable costume.

Native Hawaiians are about in much smaller numbers than we expected; their garb is the American one, except that the girls seem to have a fancy for men's pants and overalls and habitually use them for work. The women of the older generation still stick to the "Mother Hubbard" introduced by the missionaries. The traditional love of flowers is everywhere apparent

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among them, and flower *leis* for neck or hat are common—even customary.

We have finally arrived at the centre of things, and walking up Fort Street and gazing into the shop windows make us realize that we are in an American city, modern in every way, with plenty of first-class stores, beautiful theatres, comfortable hotels, excellent transportation facilities, and all the other hundred and one things that make life worth living.

It is not too late for a swim; so we hurry out to the hotel, change, and seek the water. The beach is nothing wonderful in itself; we have seen many better. But the surf is wonderful and the water clear and cool. The surf-riding, both in outriggers and on surfboards is a pleasure to watch and a thrill to participate in, and we register a vow to acquire the art before we leave. We are soon to learn that Waikiki, popular though it is because of its nearness to the city, does not hold a candle to the perfect beaches of the windward side of the island with their fine sand and freedom from coral.

The following day we start our real sightseeing, visiting in turn the aquarium with its many strange fish, and the Bishop Museum, where one may gain a very good idea of the life of old Hawaii. Then we enjoy a wonderful drive through the lovely residential districts of the city. The guide saves one of the rarest sights till the last. We have been riding up Nuuanu Valley, have passed the residential section, and still continue on a perfect road. The forest about us is dense, relieved only occasionally by a

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break in the trees through which we can see lacy waterfalls dropping like silken veils from the mountain-sides. The car climbs up and up and the clouds get nearer and nearer until they are floating only a few hundred feet above us. Suddenly, as we swing out into a large drive where a strong blast of wind nearly lifts the car from the road, we find spread before us a magnificent panorama. The cliff is the Nuuanu Pali, off which many years ago Kamehameha I forced his enemies in the battle which won the island to one rule. The drop is abrupt for more than a thousand feet. Below lies beauty we shall never forget. The road, hugging the side of the cliff, descends by easy stages to wander out through pineapple fields which cover the foothills. Far away the ocean sparkles in the sun, showing in its calmer waters inside the reef all shades of purest blue and green where coral beds appear beneath its limpid surface. Numerous beaches of the whitest sand stretch out. To the left the Koolau Range stalks away to the sea, abrupt on this the windward side and forming an impassable barrier by its lofty cliffs, green clad and cloud capped. The whole scene, overhung by a clear blue sky with dazzling clouds, forms a proper masterpiece of the Creator.

Perhaps it would be well for us to return to the hotel and have a good night's rest, fanned by the cooling trade winds as they sweep down from the hills, for to-morrow we shall start out for further exploration by that modern medium, the air.

CHAPTER II

AN AERIAL JOURNEY

WE TAKE off from Luke Field, bright and early, with a perfect day ahead of us. Gathering speed, with a rush we are off the ground, headed for the mountains. Any slight apprehension at this the first "hop" soon vanishes in the smoothness of the morning air and in the intense beauty of the country as seen from aloft. Directly before us, as we wing to a thousand feet, lie the emerald-clad slopes of the Koolau Range. Below us, the little island on which Luke Field is located already seems tiny in the midst of the large body of water which is Pearl Harbour. Looking around, we study the general plan of Oahu, noting directions and the locations of various points of interest and we are at once definitely oriented in a land which seldom uses the points of the compass, and where knowledge of various districts is essential.

We bank to the left, still climbing, and pass over canefields and over small rice paddies where, on a concrete platform, the Chinese owner is busily separating the chaff from the grain in the age-old manner. We fly over Waipahu Sugar Mill, the biggest one in the island, which we are to visit later by car. Swinging toward the sea, or *makai*, as the

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islanders have it, we face the second group of mountains, the Waianae Range, only eight miles away across the Ewa Plateau. Considerable cane is growing in that direction. It extends for miles up the gentle rise, its density broken occasionally by deep gullies, until it finally blends with the pineapple fields on toward Schofield Barracks. Ahead of us lies a jungle of algaroba trees, that hardy plant which attains scarcely the size of a large bush in Texas and Mexico where it is called mesquite, but transplanted to this climate attains the dignity and value of a tree. It is said to have been the salvation of a great deal of Hawaii, reclaiming land deforested by wild deer and goats in years past. Now, at an altitude of two thousand feet, high enough for perfect safety and comfort and not too high to enable us to observe the details of the varied life we see spread out before us, we swing down the coast in the direction of the island of Molokai.

To our left is the immense naval base built up the last few years, with its dry dock and towering wireless masts. Under us appears Fort Kamehameha, named after the first Hawaiian monarch. Ahead we recognize Honolulu Harbour, with our ship still lying at the dock. We pass Fort Shafter, headquarters of the Hawaiian Department with its parade ground surrounded by royal palms and flanked by Tripler General Hospital. The Ordnance Depot adjoins these establishments. A short distance farther on are the beautiful grounds of the Kamehameha schools, among whose buildings is that rare repository

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of Hawaiian lore, the Bishop Museum. The school is soon to be moved to new quarters where the grounds will be even more extensive and more beautiful. This school, by the way, maintained for native Hawaiians by a trust fund left by Bernace Pauahi Bishop, last descendant of Kamehameha I, has, owing to the greatly reduced number of children claiming even part Hawaiian blood, almost more money than it can use, the interest accumulating faster than it is normally expended for educational purposes.

The "X" shaped building now below us is the Territorial Prison. The prisoners at work in the yard notice us and stop their work to wave. They are concealed from terrestrial observation, perhaps; but little is hidden from the airman. We see the opening between the hills which is the Nuuanu Pali, and are tempted to fly through the pass. Such a trip often made as a short cut to the windward side by the army flier gives a considerable thrill. To sail up the valley at a few hundred feet elevation until the rapidly narrowing defile, capped at its upper end by a crown of clouds is upon one; to dash through an opening which seems about the size of the needle's eye; and to find one's self after a severe "bump" out over the open country with a good thousand feet altitude available, is an experience to be remembered. But to-day, lest our gas fail us before we reach the island of Hawaii, we shall cruise along on our course, being content with the countless beauties on every side.

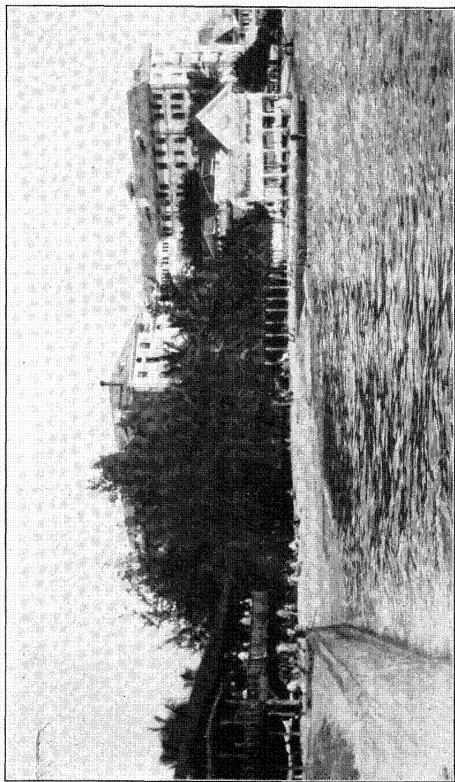
We gain a much better view of the city now, watching its suburbs stretch up into every valley and spread

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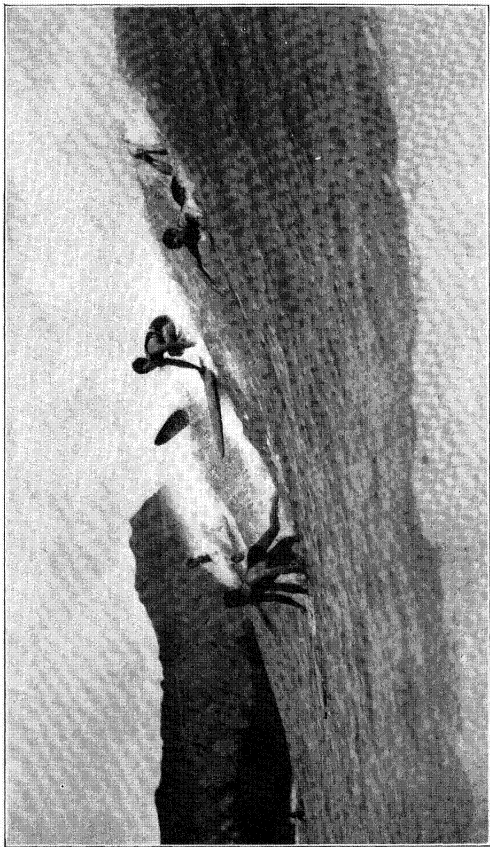
far out to Kaimuki and Waikiki. Fort Armstrong and Fort DeRussy lie behind us, Waikiki is soon beneath, and now we approach Diamond Head and surmount it.

The wind is a bit bumpy here. We are about to leave Oahu, and as we have a good stretch of sea ahead before we reach Molokai, we climb as rapidly as possible, intent on reaching an altitude that will permit us to glide to one shore or the other in case of motor trouble. From a height of ten thousand feet, the world below takes on a new beauty. Small details shrink to insignificance, and, detached from the world, we sit enthralled, drinking in the loveliness of the wide expanse. Our motors purr sweetly and we have ceased to notice their roar. We can see all the islands to the southwest. Molokai, directly ahead and less than thirty miles away, stands out clearly, backed by a towering mountain, which at first sight we take to be part of the island, but on reflection know to be Haleakala, the gigantic extinct crater on Maui. On our right is Lanai, and hiding in the haze behind it, the small island of Kahoolawe. Far away, 170 miles across the ocean, appear the twin mountains of Hawaii, the snow-capped Mauna Kea, and Mauna Loa, the still active volcano and, according to some authorities, the largest mountain mass in the world. That claim seems not exaggerated, referring as it does to the entire mountain down to the ocean floor, with its total height of 35,000 feet.

Be not apprehensive now that we are out in mid-



The Moana Hotel and the beach at Waikiki.



The most exciting sport in Hawaii, surf-riding. This is done, either on boards as in the illustration, or in outrigger canoes. Surfing is an art, hard to master. Native experts can ride a single wave on a long diagonal for at least a mile. (Photo by Honolulu Advertiser.)

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channel. True, the waves, even at this altitude, do seem pretty high and it is a long way back to shore; but our motors are reliable, a glide to either shore is possible, and besides, other worlds to conquer lie ahead.

We take but a brief glance down windward Molokai, just enough to whet our interest, for we intend to swing through the Islands and make our return up that side. We notice, however, the long peninsula of the Leper Colony and the lofty *pali* against which it abuts. Passing over a section of Molokai on our way to Lanai we drop down to get a closer view. Just below us is the familiar sign of a landing field. We glide in, "cut the gun," and land, coming to a full stop in less than fifty feet, the field being on a hilltop where it gets the full benefit of a thirty-five mile wind.

A few hundred yards away, the pineapple fields of Libby, McNeill and Libby begin. Let us gather a few of the juicy fruits, by invitation of course, for refreshment on the trip; then into the plane again and away. Beyond us, as we leave the pineapple country, we find grazing land similar to that of Oklahoma, though terminated in the distance by fair-sized mountains, green with a heavier vegetation and, as usual, capped by light fleecy clouds. Molokai is famous throughout the Islands as a happy hunting ground for the deer hunter, though the sport is not unrestricted. Hunting the wild goat is a pastime offering almost as much interest. The goats are far too numerous and, as they are a great pest,

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destroying all vegetation, the ranchers are eager to have them killed. From time to time, bounty is offered for every tail produced.

We are off across the channel to Lanai, a matter of ten minutes by air, though half a day's ride by boat. Lanai, like Molokai, has vast stretches which bear no resemblance to what one would expect in a mid-Pacific island. Plains and gentle slopes lead the eye to the small mountain, cut by deep gulches, which forms the western end of the island. Acres and acres are planted to pineapples, and the long rows of mulch paper dazzle the onlooker with their exactly parallel lines. As the smooth grassy level fields offer such a wonderful landing, we decide to descend. We cut off the motor, glide to earth, and gently ride to a stop, to investigate the place more closely.

Lanai, to-day all but 15 per cent. owned by the Hawaiian Pineapple Company, was in olden days a considerable forest. Even within the memory of some of the inhabitants, the slopes of Mauna Lei Gulch were heavily wooded from the summit to the sea. Now, nothing remains except small bushes on the extreme heights. The goats have ruined the rest. A goat hunt on the island, was one of my most pleasant experiences. Suppose we take time for a similar one.

Starting in the morning by horseback we work down through the basin to leeward and up along the ridges back toward the windward side of the mountain. Our climb up the slopes rouses coveys of Chinese pheasants, large beautiful birds, and startles

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wild chickens into flight. Occasionally a flock of wild turkeys will hop off from a near-by knoll and wing their way far out over the thousand-foot ravines, as confident in their flight as an eagle. No goats are sighted until, nearing the top of the mountain, we discover a herd of them perhaps a mile below. To manœuvre toward them, keeping always on the leeward side, until we bring up within easy rifle range, takes half an hour. Then a few carefully placed shots bring down some of the quarry. The rest spring off, placing some obstruction between themselves and danger with the greatest dexterity.

The ride itself is beautiful though somewhat dangerous. Toward the top of the mountain the trail, scarcely wide enough for a horse, leads along narrow ridges from either side of which the ground drops away almost perpendicularly for a thousand feet. On one of my trips a horse did fall, the rider, however, fortunately springing clear. Only with the greatest difficulty did it regain its footing on the slippery red clay without sliding over the edge.

Let us borrow a car from a friend for a short drive down to the new harbour of Kaumalapau, just nearing completion after two years' work. This harbour, built by the pineapple company for shipment of their pineapples to the Honolulu cannery, is remarkably neat. Much of it was blasted out of the solid rock. It has a good-sized breakwater stretching out in a long curve to curb the force of a lively sea, and is connected with Lanai City by a beautifully graded permanent road. All the work has been done under

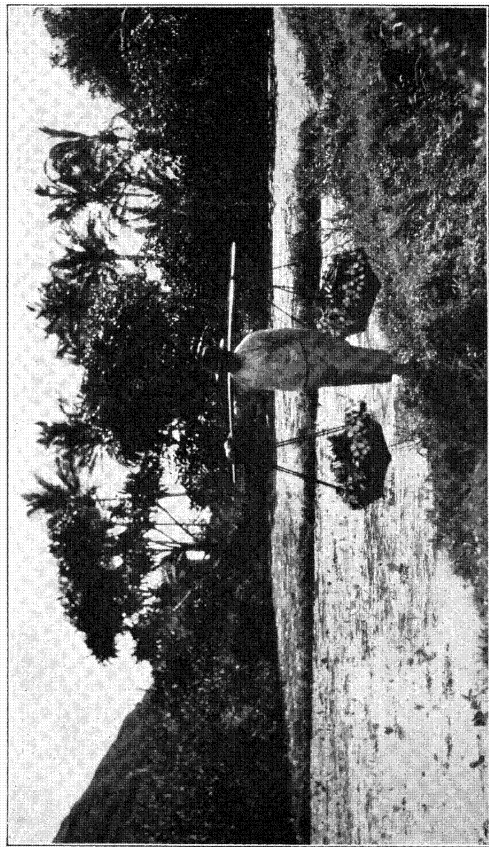
HAWAII TO-DAY

the direction of the Resident Engineer, Mr. D. E. Root.

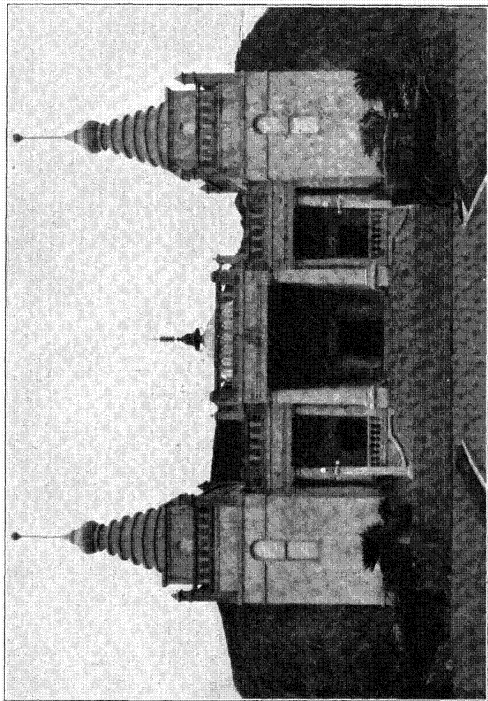
Kaunapali is an excellent example of the business-like way in which the Hawaiian Pineapple Company builds and extends its business on a large and permanent scale. The houses are modern, clean, and comfortable; schools, churches, and a hospital have been provided, and movies, athletics, and welfare activities furnished. The result is a happy community, where two years ago nothing existed.

After a short rest we are off again, passing to the right of Lanai's mountain and heading for Kahoolawe. We pass over this island and find it a desolate region. It is inhabited by one family, that of a Portuguese, who lives here with his wife and two children, and acts as caretaker. The island belongs to the owners of the Baldwin Ranch of Maui. A few cattle, some five hundred wild turkeys, and a few sheep comprise the livestock. The whole place is very arid; only with difficulty is enough water collected from rainfall to supply the stock and the human inhabitants. Strangely enough, on my first visit to the island, the planes had barely landed when a veritable cloudburst struck the landing field, and rivers of water branched off in all directions. The members of the party were drenched to the skin and had to spend the greater part of the day drying out around a big bonfire.

We leave Kahoolawe heading for the corner of Maui so as to reduce the trip across the big channel to Hawaii as far as possible. The clouds have gathered



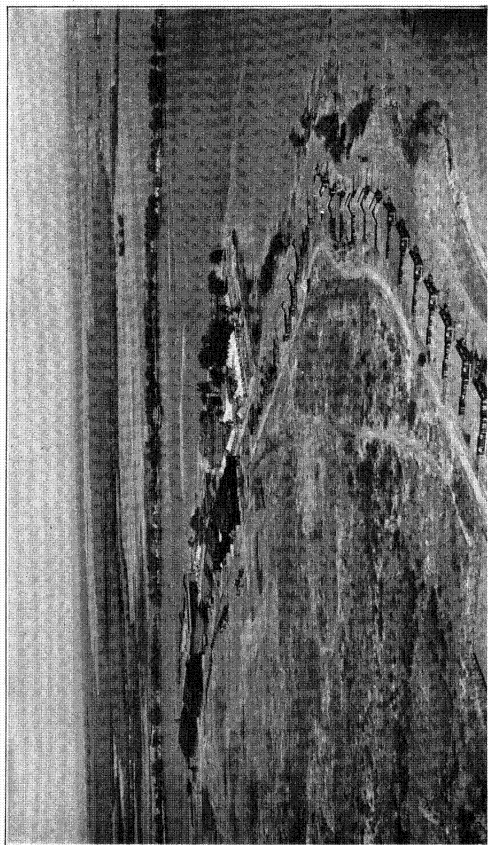
Harvesting the taro-root, from which the chief native food, poi, is made. This plant, similar to our "Elephant Ear" grows on inundated fields, cultivated with the water buffalo.



The Hongwanji Buddhist Temple, Fort St., Honolulu. One of the many churches of all faiths and denominations found in Hawaii.



The magnificent view from Nuuanu Pali, show place for visitors to Honolulu. Kaneohe Bay forms the background.



Luke Field, Pearl Harbor, Oahu, home of the combatant forces of the Army Air Service.

AN AERIAL JOURNEY

thick at an altitude of about six thousand, but through them, like a giant sentinel, Haleakala projects her 10,000 feet. To the right, the two big mountains of Hawaii also float in a sea of clouds. We climb to ten thousand feet and then to twelve, and strike out across the clouds, through which only occasionally we catch a glimpse of the sea far beneath. While we travel, let us begin to review briefly the history of the Hawaiian Islands.

CHAPTER III

HISTORY OF THE HAWAIIAN ISLANDS

ALTHOUGH it cannot be definitely said when and in what way the islands now known as the Territory of Hawaii became settled, all evidence points to a migration in ancient times from the islands lying southwest. All the islands, scattered from New Zealand to Hawaii over a distance of more than four thousand miles, are peopled by a race alike in their physical make-up, in their traditions, customs, and superstitions, and even in their spoken language, which, from section to section, shows very little variance.

Most of the traditions of the Hawaiians bear out this migration supposition. Thus, Hawaii-loa, a famous fisherman and chief, is said to have been the discoverer of the Islands, and to have made several trips to them, afterward establishing a colony. According to the memorized Hawaiian genealogy, the race was founded by Wakea, a chief, and his wife Papa. This period is so far back that hardly any record regarding it remains.

To bring the matter down to later times, the general belief holds that the Islands were first settled about 590 A. D. probably as the result of fishermen being

HISTORY OF THE HAWAIIAN ISLANDS

blown far from their course by a *kona* storm, such as blows occasionally for sometimes months at a time from the southwest. Once discovered, the ancients, having some understanding of the science of navigation by use of the stars, probably made several voyages back and forth until gradually the Islands became populated. Certain ancient remnants of handiwork such as the oldest *heiaus* and the fishponds on various of the islands, especially on Molokai, are attributed to this early period.

After these first few voyages, immigration, and in fact all intercourse, seem to have been suspended for many generations. Then, during the eleventh and twelfth centuries, activity was resumed, and it is this later migratory period that furnishes the theme of many stories and *meles*, or chants.

Among the most important voyages by Hawaiians of this period were those of Kahai, Moikeha, Kaulu, and Paumakua. The stories of these ancient voyages make absorbing reading, and can readily be found in comprehensive histories and books of legends, many of which are on the market. The most important emigrant of the period was a priest named Paa'o who came from the Samoan Islands with a band of followers, made himself high priest, and was responsible for many of the ancient tabus. His descendants functioned as high priests until the time of Kamehameha I. Tradition has it that he found the island without a king and returned to Samoa to get one, bringing back Pili, who reigned as king and from whom the first Kamehameha was descended.

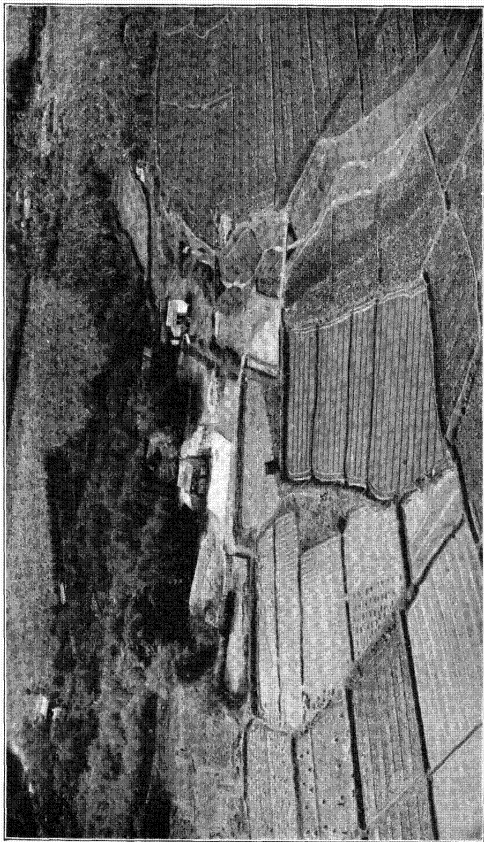
HAWAII TO-DAY

After this second period of voyaging, all intercourse between the parent islands and the Hawaiian group seems again to have ceased abruptly and for a period of five hundred years we have no evidence in song or story of other immigrations. This continued isolation of the Hawaiians permitted a gradual formation of a distinct racial group, with its own traditions and religion. The memories of the fatherland faded into the past.

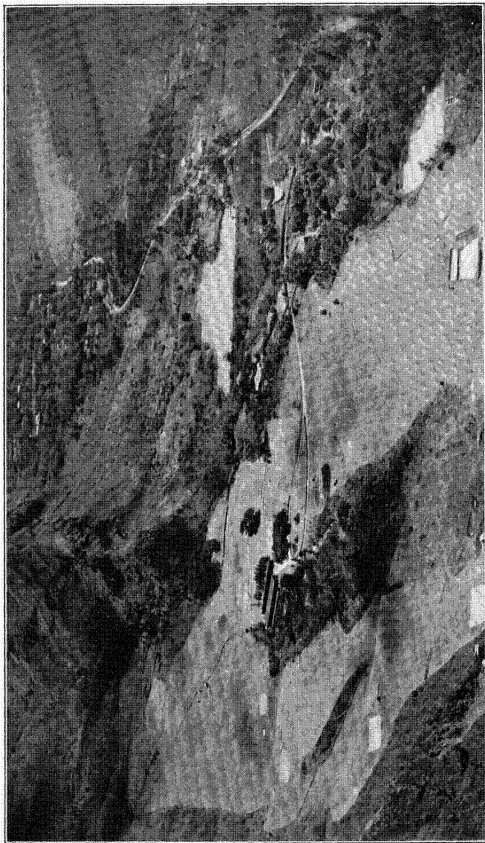
We thus come to the period of the discovery of the Islands by the outside world.

The first contact with European civilization was made in 1527, when a Spanish vessel, blown far from its course, was wrecked on the island of Hawaii. The exact location is not known, some traditions claiming that the wreck occurred at a point in South Kona, while others claim it occurred at Waimanu, on the north side of the island. The sole survivors were the captain and his sister, who intermarried with the natives and founded a line of chiefs, among whom is listed Kaikioewa, once governor of Kauai.

The Islands were again visited by Europeans in 1555, this time by Juan Gaetano, a Spanish navigator who charted them and gave them Spanish names. No publicity seems to have been given this discovery, owing to the fact, perhaps, that many other islands were being discovered at this time in the South Pacific by the Spaniards, more on the direct route between Mexico and the Philippines, and thus easier of exploitation. No record is preserved showing whether any trace was found of the survivors of twenty-eight



The Chinese farmer still grows his rice in a primitive manner, ploughing the fields with the water buffalo, sowing and cultivating by hand, and beating out the rice kernel with ancient flails or by the tramping of animals.



The Honolulu Country Club, Nuananu Valley, Oahu. Golf is enjoyed every day of the year in Hawaii. In addition to this eighteen-hole course, several other good links are available on Oahu, and adequate facilities exist on the other islands.

HISTORY OF THE HAWAIIAN ISLANDS

years previous. It is probable that Gaetano knew nothing of them.

From Gaetano's visit until the "discovery" of the Islands in 1778 by Captain Cook, British navigator, they were in a continual round of wars, the more powerful chiefs of individual islands each striving, but without permanent success, to bring the entire group under his power. It was during one of these bloody wars, which had already greatly reduced the male population, that Kamehameha I, destined to be the first king of all the Islands, was born at Halawa in the district of Kohala, Hawaii. This was in November, 1736. In the years that followed, the young prince distinguished himself as a warrior in the almost continual carnage.

Captain James Cook is generally credited with the discovery of the Hawaiian Islands, because it was he who made them known to the world. After two voyages of discovery around the globe, he was on a third voyage in search for a northern passage from the Pacific to the Atlantic, when, sailing northward, on the 18th of December, 1778, he first sighted the island of Oahu to the northeast. Soon after, he sighted Kauai directly ahead, and the following morning, while on the same course, Niihau. That day, while cruising near Kauai, he first saw some of the natives. They came up in canoes to offer barter, but were afraid to come on board. The Captain was agreeably surprised to find that they spoke a language which so resembled that of the Society Islands that he experienced little difficulty in communicating with them.

HAWAII TO-DAY

He spent a night near the shore, and on the 20th made a landing in Waimea Bay. The English found the natives friendly. They exchanged presents with them and the following day began to barter in order to provision the ships with the necessities, fresh meat, water, and vegetables. They were given feather cloaks, helmets, and the skins of the red bird, *iwipolena*, now very rare. The two ships touched at Niihau, and then sailed away.

The impression made on the natives by this visit seems to have been profound. Puzzled to account for the white people, they generally accredited them as gods, many regarding Captain Cook as the incarnation of the ancient god Lono, returned, as they thought, in fulfilment of an old prophecy. News of the strangers was sent to all the other islands.

Captain Cook spent several months in arctic exploration, and then, when the forming ice drove him away, he sailed again for Hawaii to spend the winter. He arrived off windward Maui the 26th of November and, passing to the east of the island, was hailed by several canoes, in one of which was Kamehameha, then serving in the army of Kalaniopuu, the aged king of Hawaii, who was at war with Kahekili of Maui. Kamehameha spent the night aboard ship and returned to the island the next day.

Captain Cook sailed on to northern Kohala, Hawaii, and after trading a few days there, spent the entire month of December sailing down the east and south coasts of the big island, finally coming to anchor in Kealakekua Bay, January 17, 1779. On landing

HISTORY OF THE HAWAIIAN ISLANDS

he was taken for the god Lono, loaded with gifts, installed in the large *heiau*, which is, by the way, still standing in an excellent state of preservation at Napoopoo, and was worshipped by priests and people. The entire ship's companies were looked upon as supernatural beings and without remuneration were furnished all the food they could use. A few days later the king, Kalaniopuu, arrived from Maui and paid Captain Cook a ceremonial visit, presenting him with several of the most costly feather cloaks. He was presented in turn by Captain Cook with a cutlass and a linen shirt.

After about ten days, the conduct of the sailors becoming so abandoned as to merit the disgust even of the natives, a doubt as to their divinity was formed which was further strengthened when Captain Cook permitted his men to use the fence and even many of the wooden idols in the *heiau* for firewood. The natives now began to harass the ship's companies by petty thieving. The king still remained friendly, however, and learning of the coming departure of Captain Cook, "sped the parting guest" with a large supply of provisions for which no charge was made.

On the 4th of February the vessels took their departure, but, running into a gale off Kawaihae in which the *Resolution* lost her foremast, they were forced to return to Napoopoo. They were met with hostility and it was plainly to be seen that the old friendship was ended. Some barter was carried on, the principal article desired by the natives being iron daggers, which the ship's blacksmith forged. Thievery

HAWAII TO-DAY

recommenced and efforts of the ships' officers to apprehend the guilty and recover the plunder were unsuccessful. The men involved were retainers of a chief named Palea, who did all he could to stop the depredations, and who recovered many of the stolen articles. Several brawls arose during the attempts to catch or punish natives, and the matter finally came to a head by the theft, during the night, of a large cutter from the *Discovery*.

Captain Cook determined to bring the king on board as hostage until all stolen articles were returned, a plan he had found efficacious in the southern islands. The king was willing, but his councillors held him back. It is possible that Captain Cook would have been successful in his designs had not one of the ships fired on an approaching canoe, which chanced to contain high chiefs from Keei, who, just arriving, knew nothing of the trouble. One of the chiefs was killed. This sad news was at once transmitted to the king and incited the crowd now collected, to violence. One warrior, approaching Captain Cook, dagger in hand, to claim revenge for the death of his friend was fired at without effect. Captain Cook, preparing to retire, ordered his marines back to the shore, but as soon as they had left he was struck by a stone and, noticing its sender, shot and killed the assailant. This started a general *mêlée*, in which firearms were discharged into the crowd. The natives rushed the marines despite this and killed four, forcing the remainder to retreat. As Captain Cook turned to signal his boat in, he was stabbed through the back

HISTORY OF THE HAWAIIAN ISLANDS

and, falling into the water, died. Seeing their leader killed, the ships' companies retired to their vessels under cover of the cannon which opened fire and forced the natives back from the beach.

In the disposition made of his body, Captain Cook was tendered all the customary honours of a chief; the flesh was removed and burned, while the bones were tied in a bundle and carried to the *heiau* for worship. After considerable trouble, part of the bones were recovered by the ships' officers and were buried at sea near Napoopoo. The remainder were given in charge to a priest of a large *heiau* of Lono, where they were worshipped until the abolition of idolatry when they were hidden by the priests and have never been recovered.

The ships sailed again for the Arctic on the 23rd, stopping only a day at Waimea, Kauai, for water, and for several years thereafter no foreign vessel called at Hawaii. These visits of Captain Cook were, however, the turning point in Hawaiian history; from this time on, the influence of outsiders is clearly seen in the development of the internal policies, the religion, and the life of the people.

CHAPTER IV

AN AERIAL JOURNEY—CONTINUED

WE ARE approaching the island of Hawaii, and as a heavy mantle of clouds obscures the world for miles around, we take advantage of a hole and drop through to three thousand feet, finding ourselves just off the northern spur of the island. Below us is Upolu Point prepared as an emergency landing field. The district is Kohala, and the mountains just beyond the fields of growing sugar cane are known as the Kohala Mountains. Several small villages dot the landscape, and to windward we glimpse the usual *pali* formation. We glide along the leeward coast, and immediately notice that it *is* the leeward coast, first by the calm water, and next by the series of bad bumps which occur, owing to the wind's sweeping down over the irregularities of the Kohala slopes and meeting the warm currents set up by the sun on the dried-out lower levels.

The slopes are covered with the ruins of ancient villages, the outlines of which are very distinct from the air though practically obliterated from any other point of view. We pick out a *heiau* and as we reach Kawaihae discover another, the latter, one of the last to be consecrated before idolatry was abolished, still in excellent condition. Just below the *heiau* at

AN AERIAL JOURNEY—CONTINUED

Kawaihae, we see another and older temple nearly concealed by the trees. This district was the ancient home of Kamehameha I, and many irrigation ditches and other works of his built during intervals between the numerous wars are still in evidence.

As we fly onward, we find the ground gradually rising and growing rougher in character. Boulders are scattered everywhere; old Hawaiian villages composed entirely of loose rock abound. A few minutes' flight, and we swing around the shoulder of the Kohala hills with the immense reaches of the Parker Ranch below us, the verdant green of its trees and grasses contrasting sharply with the desolate stretch we have just covered. Directly ahead of us through a rift in the clouds we see the high-flung summit of Mauna Kea, snow capped and sparkling in the sun. Beneath the clouds, the ranch paddocks stretch far and away to the foot of the mountain and up its slopes to the 7,000-foot level. Herds of cattle and horses are everywhere, for this is the largest ranch in the Islands. The landing "T" is directly ahead; so we shall alight and learn a bit more of the ranch.

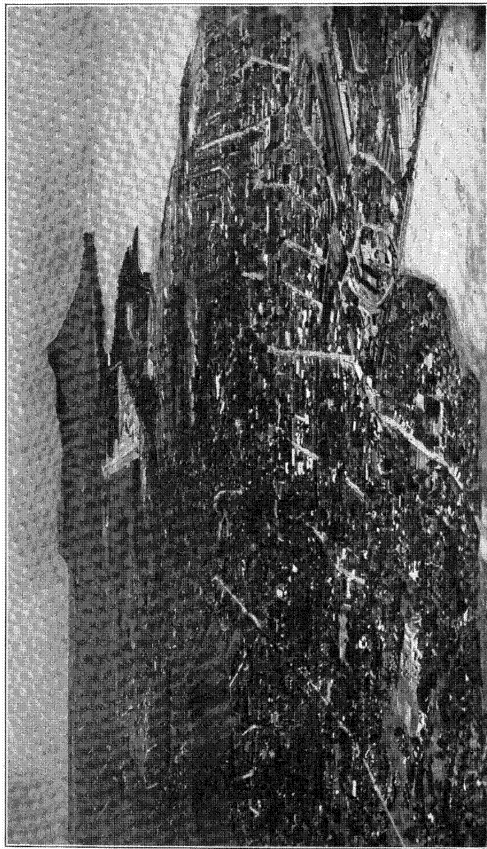
Hotel facilities are available at the ranch, which is, in fact, a reasonably large village. But on this occasion we shall be the guests of Mr. Alfred W. Carter, the manager. After a turkey dinner with all the "fixin's"—a dinner we shall not soon forget—Mr. Carter consents to tell us something of the history of the ranch.

Ranching, he says, was started on a small scale in 1820 by John Parker, a native of Newton, Massa-

HAWAII TO-DAY

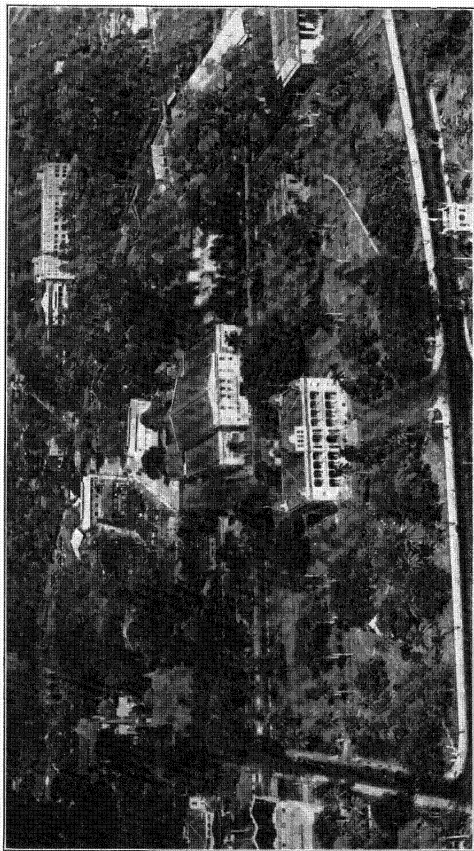
chusetts, who acquired the use of some land on lease and other land in fee simple. The various holdings were scattered, and the cattle in those early times, being imported from Mexico, where of nondescript breed. Farming was tried for a time without any very startling success. The ranch is now the property of Richard Smart, thirteen years old, whose mother, a Parker before her marriage, died in 1916, followed by her husband a year later. Mr. Carter, who has managed the ranch for twenty-six years, is trustee and guardian of the child for life by the terms of the mother's will.

When Mr. Carter took over the management, the ranch land was still widely scattered. His immediate aim was toward consolidation, and by selling, buying, and trading holdings, he developed the ranch to the point where it is by far the largest in the Islands. It has an area of 400,000 acres and is valued at more than \$2,000,000. Starting with a few cattle and horses bred from those brought from Mexico to Kamehameha I by Vancouver and Cleveland, the ranch now has the fifth largest herd of pure-bred Herefords in the world, 1,200 head. It has in addition 25,000 cattle, 2,800 horses and mules, 10,000 merino sheep, 12,000 turkeys, and 2,000 hogs. The Mexican breed of cattle, being worth only one fourth the price of good stock, has been practically eliminated, only a few of them and a few wild horses being left on the upper slopes of the mountain. In the first sixteen years of Mr. Carter's management, 8,000 of them were taken from the hills and butchered.



Headed for Molokai with the city of Honolulu at our feet, Punch Bowl left centre, and Diamond Head in centre background. Waikiki Beach with the Moana Hotel is visible in the indentation just this side of Diamond Head.

A corner of Honolulu Harbour is seen in right low centre.



The palace of the kings of Hawaii, now used as Capitol, is seen in the centre, flanked on the right by the small Archives Building and the Public Library. The building almost directly behind the palace is the National Guard Armory while beside it appears the old armory of the monarchy, now used as the Army Service Club. Queens Hospital is seen in the upper right hand corner.

AN AERIAL JOURNEY—CONTINUED

From fifteen hundred to three thousand acres of corn is harvested annually on the ranch, half of which is fed to the stock.

We can gain some idea of the immensity of the place when we realize that it consists of a broad belt of land extending from the ocean at Kawaihae to Kamuela, the ranch headquarters, and then spreading in a great fan across the plains to Mauna Kea which it embraces up to the 8,000-foot level in almost a complete circle. From here it reaches out toward Mauna Loa well into the worthless volcanic ash. It utilizes 130 miles of piping and an equal distance of quarter-inch, five-wire, triple galvanized fencing. Not an inch of barbed wire is in use. The ranch is particularly proud of its race horses, several of which have made names for themselves on mainland tracks.

By car we go sightseeing. We spin rapidly through beautiful groves of Australian ironwoods, first to the racing stables, and then out on the plains through herds of cattle to view a modern dairy capable of handling in the most modern manner 300 milch cows daily. On our return, we pass a yard where an old Hawaiian is just removing food of some sort from an *imu*, or ground oven. Being curious, we stop to inquire and are given a dish of a delicious concoction. It is *kulolo*, a pudding made of coconut, sweet potato, and wild honey, mixed, wrapped in *ti* leaves, and baked by hot stones buried in the ground. We find it is delicious, but so sweet that a very little suffices.

We get back to ranch headquarters just in time to see a most interesting spectacle, the delivery of the

HAWAII TO-DAY

semi-weekly supply of *poi* to the ranch. Twenty burros file past, each laden with four fifty-pound sacks of it, protected from the sun by coverings of *ti* leaves. Two tons to last ranch employees for only half a week! The *poi* comes from Waipio Valley, ancient stronghold of Hawaiian kings, and accessible only by a foot trail. We shall look this valley over later.

Though we should like to tarry longer, we must again take flight, for the most wonderful part of our trip is just ahead, and we must spend the night at the volcano. With the motors tuned up and functioning perfectly, we take off from the Parker Ranch, gaining speed over the somewhat uneven ground to get our last bounce into the air from a small mound near the end of the field. The cattle have by this time become so accustomed to airplanes that they stand placidly by while we rush past and take the air at sixty miles an hour. Far and near we see herds upon herds of them. We make for the windward coast, bearing for Mauna Kea whose snow-capped summit towers in the distance. No laborious two-day trip for us! We shall climb and surmount her lofty crest in a scant hour.

Behind us the ranch looks like a contour drawing against the slopes of the Kohala Mountains, beyond which the greater bulk of old Haleakala looms up far across the channel. Before us the hoary-headed mountain grows ever nearer. We circle the summit clockwise and head again toward Parker Ranch. Among the banks of snow we see a small green lake.

AN AERIAL JOURNEY—CONTINUED

It is said that though it is very tiny, no man has ever been able to throw a rock across it. This is because of the rarefied atmosphere of its high location. We can appreciate the truth of the story for our altitude is now 16,000 feet and on standing up in the plane to obtain a better view of the mountain, we find that every move we make is an effort. The old reliable motors plug steadily along, however, with altitude adjustment wide open and without apparent fatigue. The air is rather cold, but the wonders of the earth spread before us compensate for all inconveniences. We feel alone, cut off from our workaday world so far below. No sign of life is apparent, and we might be explorers on an unknown and uninhabited planet. A feeling of exultation pervades us. The fear of falling from such a height never enters our heads. We are secure and very much at peace.

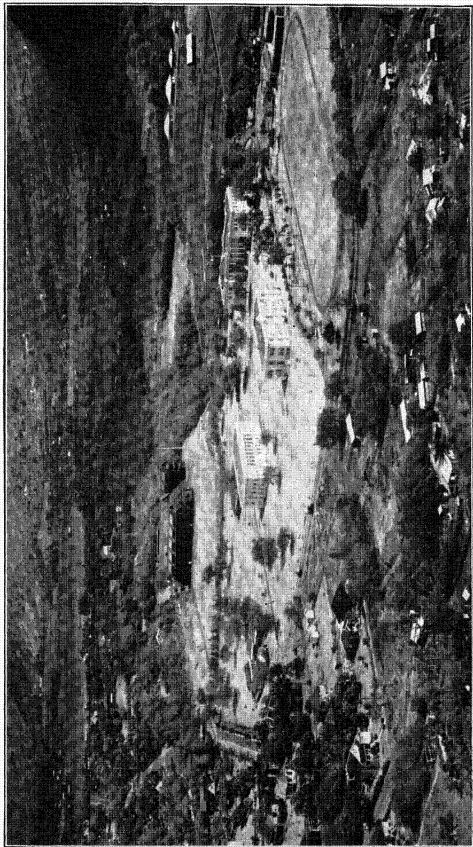
To our left the gradual slope of Mauna Loa rises, also snow encrusted near the summit. Off toward the sea Mt. Hualalai rears itself above the clouds, looking far higher than its actual 8,269 feet. We shift our course and bear directly for Mauna Loa. As we approach, the mountain appears like the top of a huge globe, and on its surface, traced for all to see, lies the evidence of God's mighty works. It takes little imagining, detached from the world as we are, to feel ourselves present at the Beginning, a witness of the globe's emergence from chaos. Lava flows of all ages lie below. No vegetation is apparent. Just over the rim of the huge crater which caps the summit a light wisp of smoke seems to indicate that per-

HAWAII TO-DAY

haps the Lord is not quite satisfied with his handiwork and contemplates a bit of remodelling. We climb above the edge of the crater to look directly into the huge cauldron called Mokuaweoweo. Here recent lava flows are easily distinguishable as intensely black rock, glistening dark under a slight fall of mist or dew as though just cooled. Free sulphur and steam show at several places near the cliff side.

As we gaze down upon this terrible landscape, we do feel a little thrill of anxiety. Our motor, we know, is at its limit. Not another inch upward can it pull our plane. Motor failure would mean a landing on the rough lava below, for the huge mountain near its summit is like a high plateau, so immense that it would be impossible for us to glide from our location to safety. Parachutes! To be sure, we have them, but we have not forgotten that, while one's impact at sea level when jumping with them is that of a ten-foot drop, in rarer atmosphere it becomes steadily greater. Parachutes will do no good here.

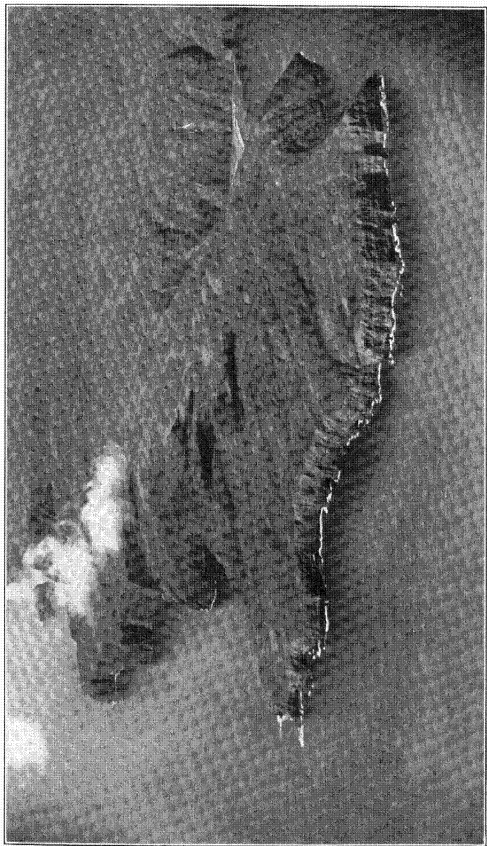
No need for alarm, however, for even as we have been talking about the danger, we have passed beyond it and are out over the great void looking down at the volcano of Kilauea far down on Mauna Loa's lower slopes. Halemaumau, Madam Pele's "House of Everlasting Fire," the centre of her frequent disturbances, appears under the light clouds. We drop as rapidly as safety permits, anxious to leave the realms of the gods and return to the haunts of men. Soon we are at an elevation where we can better appreciate the volcano. There lies the crater, filled to within



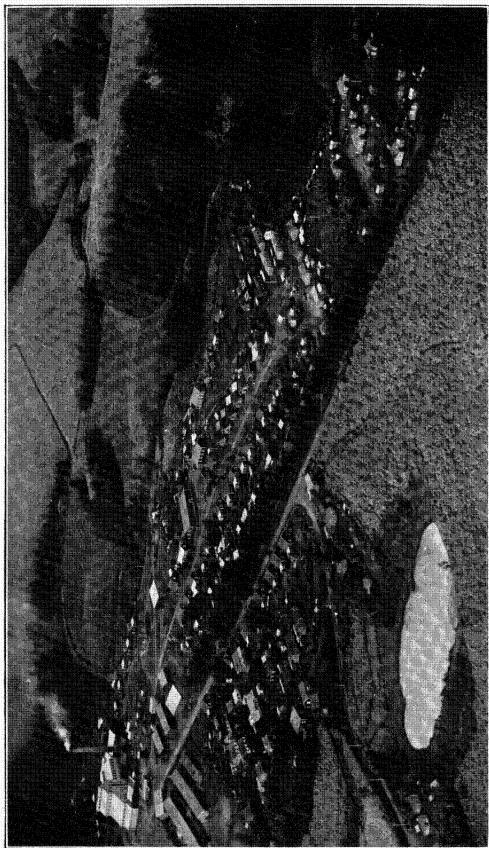
The University of Hawaii, a modern up-to-date institution, whose scholastic standards exceed those of many mainland colleges.



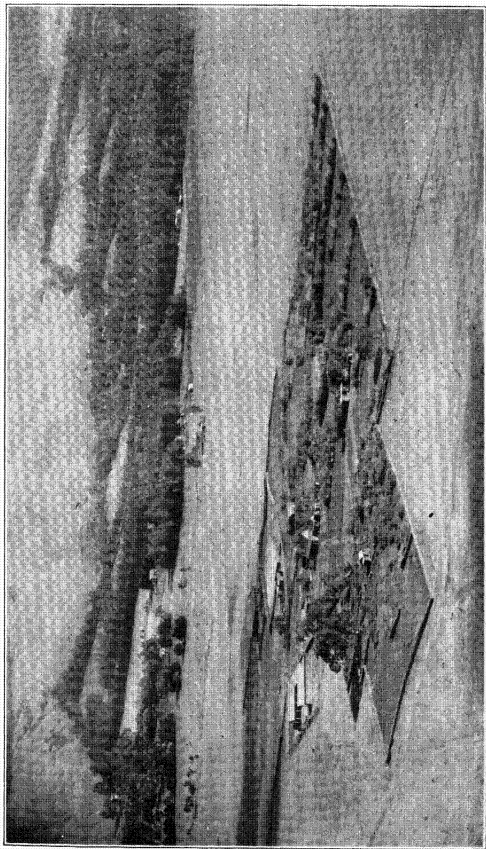
Looking down windward Molokai from the west at an altitude of over a mile. The airplanes are Martin Bombers from the Army Air Force at Luke Field; the long peninsula, the home of the Leper Colony.



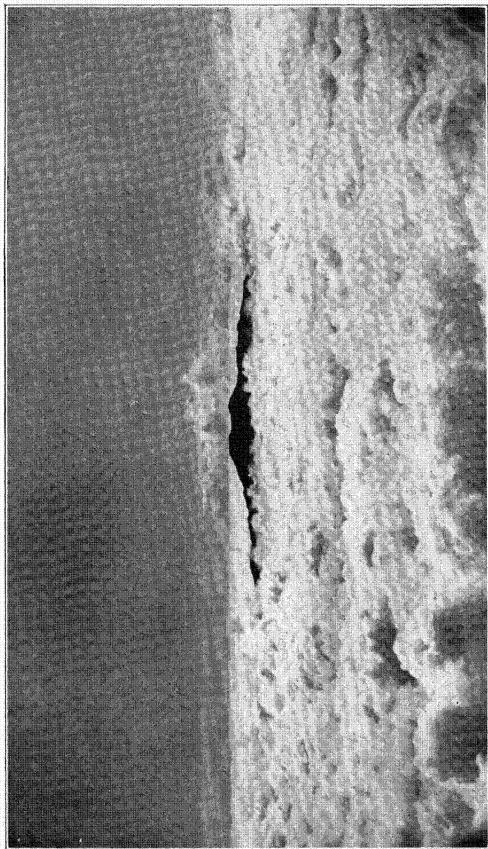
Kahoolawe, the smallest and most arid inhabited island in the Group.



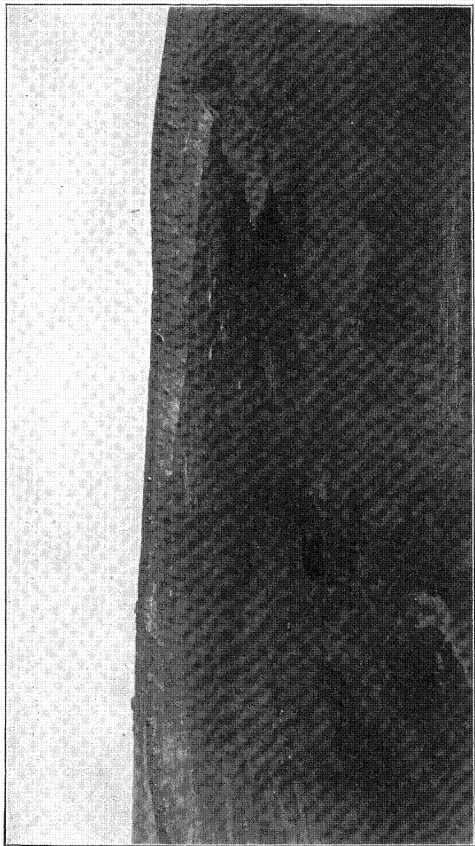
The Hawai Sugar Mill, Kohala District, Hawaii. On the island of Hawaii cane is transported to the mill by flume, train, aerial trolley, and, in the case of the mill illustrated, by tractor trains; tractors are followed by a string of cane laden wagons.



One of the stations of the Parker Ranch, on the fertile plains between Mauna Kea and the Kohala Mountains, Hawaii. The usual landing field is just to the right of the cultivated spot.



As we rise above the clouds on our way to Mauna Kea, the black peak of Hualalai is seen to the southward.



Looking down on the huge crater, Mokuaweoweo, situated atop Mauna Loa, 13,675 feet high. Note the spots of snow in the pool of solidified lava, and the lava flows as they start down the mountain.



Approaching Kilauea through the clouds. The outlines of ice crater are seen, with the fire pit in the centre, the landing field just beyond and to the left with the Kau Desert encroaching in the upper right. The molten lava in the pit was three hundred feet below the edge when this picture was taken, though it sometimes reaches a depth of fifteen hundred feet.

AN AERIAL JOURNEY—CONTINUED

300 feet of its top with boiling lava—rivers of lava which well up in one place only to disappear in another. Occasionally, we note a sudden burst of a lava fountain sending the molten rock high into the air. We drop nearly to the edge of the fire pit and swing out across it, looking directly down upon an inferno of heat that is apparent even in our rapid flight. Fumes of gases come up to us, particularly of sulphur, which cloud our goggles; but we are soon away and out of danger.

Close by appears what was one of the strangest landing fields in the world—a spit of land, old lava, surrounded by the heavy black lava of a recent flow, only an eighth of a mile from the fire pit. It was on this gravelly spit that the first aerial travellers to the volcano landed in November, 1923. The author, who piloted the Photo Ship on that trip, used this field as a base for numerous photographic missions during the few days of the stay. We find we can no longer land here, as Madam Pele, goddess of the volcano, during one of her angry spells, covered the field with a shower of rocks, one of them weighing more than six tons.

We continue on around the rim of the main crater, past the National Park Headquarters, the Volcanologists' Laboratory, and the Volcano House, to the Military Camp. This camp, built and maintained as a place for rest and recuperation for members of the military establishment, is beautifully located and well kept. Beyond it we find a small landing field, which has been prepared to take the place of the one Madam Pele destroyed. As twilight, and a brief

HAWAII TO-DAY

one, is approaching, we land, and I leave you to an excellent dinner and a night of cool refreshing sleep, safe on the brink of an active volcano.

We are up at sunrise to observe a curious phenomenon, the steam cloud above the fire pit. Though, during the heat of the day, the steam emerging from the pit is intermittent and not usually very impressive, the heat from the pit rising against the cold air of early morning forms a dense cloud of water vapour which extends high into the heavens and gives, except for its whiteness, a good idea of an explosive eruption.

After this spectacle, we set out by car for the head of the Crockett Trail, avoiding for the present the nearer attractions of the sulphur baths and banks, golf links and bird forest. The way lies through beautiful forests of giant fern, *ohia*, and other native trees which we often stop to examine. Many wild flowers are blooming. A short drive over perfect roads brings us to Thurston Tube, the most convenient to examine of the many lava tubes. Its entrance lies in a small crater, thick with tropical growth, and using our flashlights as we pick our way up the tube, which averages ten or twelve feet in diameter, we gain some idea of the ways of volcanoes.

The island is honeycombed with these tubes. They are the ancient channels by which the lava flows sought the surface, their outer shells hardening where the lava cooled, while the bulk of the molten matter either flowed on through to the outer world or subsided to its source. In some places the shell between us and the inner shell is slight indeed, the heat is very

AN AERIAL JOURNEY—CONTINUED

apparent, sulphur fumes abound, and our enthusiasm for an explorer's life suffers a relapse.

We are out of the Thurston Tube by another opening and press on as far as car may go on the Crockett Trail. From now on, we use Shanks's mare. The walk is decidedly interesting. Under the personal supervision of Thomas Boles, Superintendent of the Hawaii National Park, we rapidly progress in our knowledge of things Hawaiian. The *ohelo* berries, long sacred to the goddess Pele, are pointed out and we sample them. We like the sample so well that we continue to pluck them from the bushes as we walk along, quite unmolested by the wrath of Madam Pele. We pass crater after crater, long since dead to volcanic fires, in the depths of which the true bird forests are located, dense growths of trees through which flit bright splashes of colour, beautiful ancient Hawaiian birds, extinct elsewhere on the Islands. We come to the "Devil's Throat" and approach it with caution. Crawling up to the small circular opening, we peer over. The rock recedes under us, and we find ourselves gazing from the vantage point of the narrow neck into the depths of a bottle 250 feet deep. The formation is so symmetrical and smooth as to seem the work of human hands. We go on and find more plants with edible berries and one plant which does not come within this classification, but which the ancients were accustomed to grind up, using its juice to poison fish.

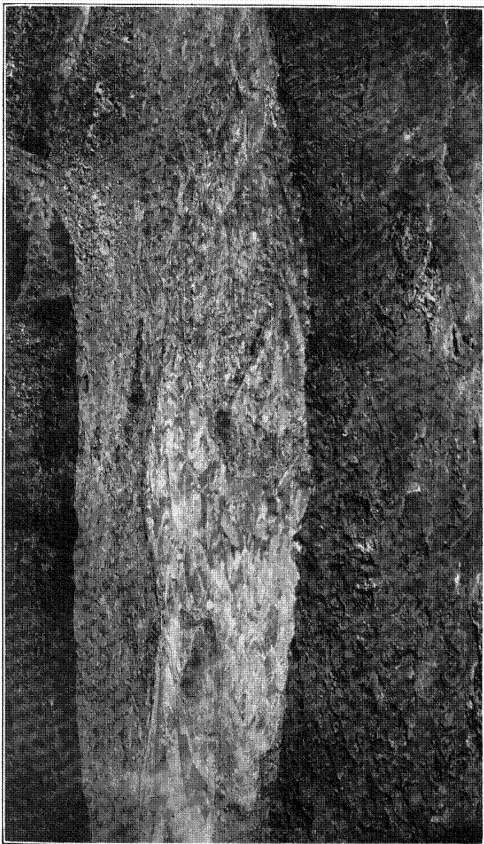
We pass another crater or two in the series which extends from the volcano toward the coast and marvel

HAWAII TO-DAY

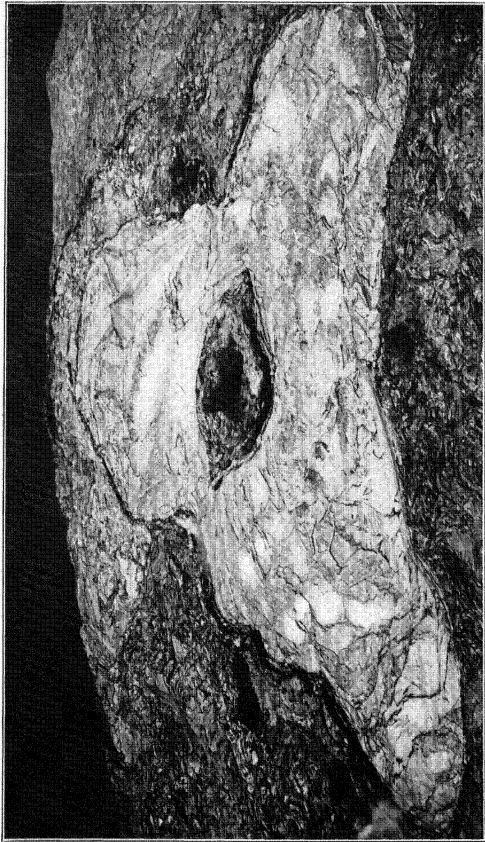
at more of the beautiful songsters that in ancient times were so valued for their plumage, particularly a brilliant crimson bird and one a bright canary yellow. We climb over rough ground to Puu Hululu, a small mount or volcanic cone from the summit of which we can look down the line of craters through Puna to the sea while we eat our lunch.

Leaving the established trail, we strike off to one side to examine large tree moulds. Tree moulds are of two kinds. Those seen near the Volcano House were formed when a thick flow of lava surrounded a grove of trees, and because of the nature of the ground did not entirely run off but solidified, cooling rapidly around the tree trunks. They either burned or rotted out and left perfect moulds sunk down in a bed of lava. These moulds are so numerous and so cleverly concealed in many cases by ferns and grasses that one must walk warily among them. The other type of moulds, the kind we are now examining, were made in precisely the same way, except that they were formed about trees standing on a slope. The main stream of lava, after encircling the trees, flowed on, leaving the trees encased in lava behind it. The upper branches burned off, and later the inner core burned or rotted out and the result in each case is a hollow lava tree.

Going farther afield, we come to the region of a late flow, that of 1923. It looks even more recent than that. Spatters of lava hang from the trees where they have been blown from cracks or tiny spatter cones. Small flows of lava run from other



A close-up picture of the molten lava in the fire pit. Note also the rock piled in the right background, the result of an avalanche caused by one of the frequent earthquakes.



A picture taken from the airplane within the pit and close to the boiling rock. The island in the centre seemed composed of some extra hard material as it remained for two days before liquifying.

AN AERIAL JOURNEY—CONTINUED

cracks, and we finally arrive at several acres of the fresh lava. We must exercise extreme care in picking our way, and even then one of our group steps on apparently solid lava to find it but a thin crust, and sinks through to the knee. Free sulphur crystals are everywhere. Odd formations and tree and bush moulds of every nature abound. We use up all our camera films and are restrained with difficulty from taking home samples of the various formations. We realize, however, that such a practice would soon spoil the sight for others, and then, too, we begin to remember we have ten miles back trail to make, and lava *is* heavy.

The back trail is uneventful, and we arrive at our cars happy, but with our canteens empty. After an excellent dinner we return to the floor of the crater and to the brink of Halemaumau. The spectacle at night is one that defies description. One realizes at once that all the vivid red pictures seen of the volcano at night are not, as might be thought, overdone. One is reminded of a huge foundry, where molten metal is poured from the furnaces, but here the process seems never ending. Back and forth the hellish river flows, absorbing a bit of rock here and there and carrying it away on its bosom to subterranean regions. Occasionally, part of the great flood will subside and cool, only to break out with renewed fury in another region. Several fountains are in play, one or two quite regular, while almost directly below us a small cone periodically fires tons of rock and hot lava into the air with a dull "pfut."

HAWAII TO-DAY

The next morning, we witness a wonderful exhibition, a volcanic eruption. Awakened at dawn by a few severe quakes, we hasten through our meal determined to miss nothing. Soon we wonder if, perhaps, we had not better miss it after all. At 9:13 a big explosion occurs in the pit. Clouds of smoke, dust, and rock form, and second by second, reinforced by other explosions, rise into the air, obscuring everything and reaching to tremendous altitudes. Huge boulders are thrown for miles. Dust and rock fall from the clouds, and it is fortunate indeed that people warned by the approaching rumbles have given the pit a wide berth. After the big demonstration, all quiets down, though the dust cloud floats out over the Kau Desert and the deposit it leaves will be visible for many months.*

Hilo, unfortunately, has no Air Port; so we must continue our explorations in that direction by car. The road is down hill and the grade so consistent that we are able to glide nearly the entire distance of thirty miles without using the motor. Hilo town, known as Waiakea in olden days, has a different atmosphere from Honolulu, though it is difficult to decide just where the difference lies. The town is not nearly as large and the Orientals are more noticeable. Many conduct business who do not understand the English

*I have taken several liberties with time in the above descriptions of the volcano, having described as one, two phases actually over a year apart as I saw them. At this moment of writing the pit is empty of hot lava, is greatly enlarged and more than one thousand feet deep. The only activities noticeable are the occasional slight earthquakes and the almost continual avalanches down its sides.

AN AERIAL JOURNEY—CONTINUED

language, and even in the restaurants we find difficulty in making ourselves understood. The city is stretched along the water for several miles and with its coal-black lava beaches, palm fringed in front, and snow-capped Mauna Kea for a background, it makes a pretty picture.

While we are in Hilo we wish to see the Naha Stone, which reposes in the grounds of the Public Library. Its origin is shrouded in mystery, the first authentic record being of its transfer from the island of Kauai to Hawaii, where it was placed in front of the Temple Pinao. This stone was said to have the peculiar property of determining the legitimacy of those claiming to be of the royal blood of the Naha family. The infant on whom the test was to be made was laid upon it while the *kahunas* or priests chanted and prayed; a single cry from the babe lost him for ever his birth-right as a noble.

The mysterious stone had a further significance. An old prophecy stated that whoever was able to overthrow it single-handed would reign king of all the islands. When Kamehameha was in his early manhood, his advisers urged him to journey to Hilo to attempt the feat. Though not of the royal Naha line, he was an exceedingly strong man, and it is said that, after exerting himself so strenuously that "blood burst from his eyes and from the tips of his fingers," he overturned the stone. Beside the Naha Stone lies one of the pillars which formed the entrance of the great Temple Pinao, the rest of which was destroyed when the city was built.

HAWAII TO-DAY

After visiting Rainbow Falls, on the outskirts of Hilo, we continue a mile and a half farther along the same road, and then turn aside to follow a small trail to the Boiling Pots, a series of pot-holes in the rock bed of the river, which are fed by a subterranean supply and seem to boil.

The Kaumana Caves, near the city, are an interesting example of lava caves. All caves on Hawaii are of lava formation, being in reality as I have said, tubes or arteries through which the lava flowed, and which, drained of their fiery liquid, remain as vast subterranean passages running back miles into the heart of the mountain. These passages probably run into the thousands, and many of them have never been explored. The Kaumana Caves were formed under the 1880 lava flow, which started from a crack on the slope of Mauna Loa and flowed for ten months, ending only a scant mile from Hilo. We find the entrance to the cave or caves in the bottom of a small ravine. One opening leads *mauka*, mountainward, and the other *makai*, seaward. We penetrate the *makai* cave but a short distance, using our electric flashlights. The lava drippings from the roof remind one of the stalactite formations of limestone caves. As this cave runs for miles with no other known exit, we turn in the other direction and enter the *mauka* cave. A fifteen-minute walk brings us to another entrance. The going proves fairly easy except for a short distance where care is required across a jumble of loose rock.

The drive from Hilo into the Hamakua district is

AN AERIAL JOURNEY—CONTINUED

beautiful and through country that is particularly rich in legend. Little remains actually to indicate a populous section in olden times though at Laupahoe-hoe the ruins of numerous *heiaus* are still standing. Most of the rock once collected for these temples has now been converted into other buildings.

We turn southward once more and visit the Akaka Falls, near Honomu, the finest on the island. They well repay us for the visit. Continuing south through Hilo again, we head for Puna district, following for some distance the road from the Volcano. Passing through Olaa, headquarters for the sugar plantation of that name, we drive through a beautiful forest of second growth *ohia* (a hardwood) and *koa* (Hawaiian mahogany) to Pahoa, where the mill for the lumber industry is located. The underbrush along the road is thick with delicious thimble berries. Here we notice roots of the *awa* drying, a shrub or herb used as a medicine by the natives. We take the south branch of the road and travel through a tangled, wild-appearing forest growing on decomposed lava flows to Kaimu and Kalapana on the Puna coast. Kaimu has a wonderful big beach of pure black volcanic sand with a large grove of coconuts for a background. The surf is good, but at times the undertow is dangerous. Both Kaimu and Kalapana, which is a mile down the beach, are purely Hawaiian villages where the natives live more nearly in accordance with their ancient customs than anywhere else in the Islands with the possible exception of Niihau. The town is notable, as indeed all Puna towns are, for the

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fine groves of coconut, *lauhala*, and monkeypod trees with which it is surrounded.

On the bluff which rises from the sea just beyond Kalapana we find a very interesting cave. Like all Hawaiian caves it is a lava tube. It runs from back in the interior down to the coast and terminates in a hole in the face of the cliff, possibly fifty feet above high water. It had fallen in at one place on the plateau, and the old Hawaiians took advantage of this fact, narrowing the entrance by carefully building a tortuous passage in it just large enough for one man to pass at a time. The cave was used as a place of refuge. Large enough to hold a hundred or more, it was capable of being defended by one man. As it opens directly above the water, fishing could be carried on, and it is probable that fresh water was to be found at that time farther back in the cavern, as happens in many places in this district.

Near Kalapana, too, we may see the remnant of a large *heiau*, that of Niukukahi, covered with undergrowth. A few miles farther on over very rough *aa* lava we find Wahaula *heiau*, last of the temples to practise idolatry. The way to this is terribly rough, until we run across the narrow trail of smooth slabs of stone carried by the ancients from great distances to make the *aa* passable. This *heiau* is one of the largest and best preserved in the Islands. Built entirely of rough clinker lava, it measures one hundred thirty-two feet by seventy-two feet and has in addition a large outer inclosure for the use of the common people. Sacrificial rock and altar are still to be seen.

AN AERIAL JOURNEY—CONTINUED

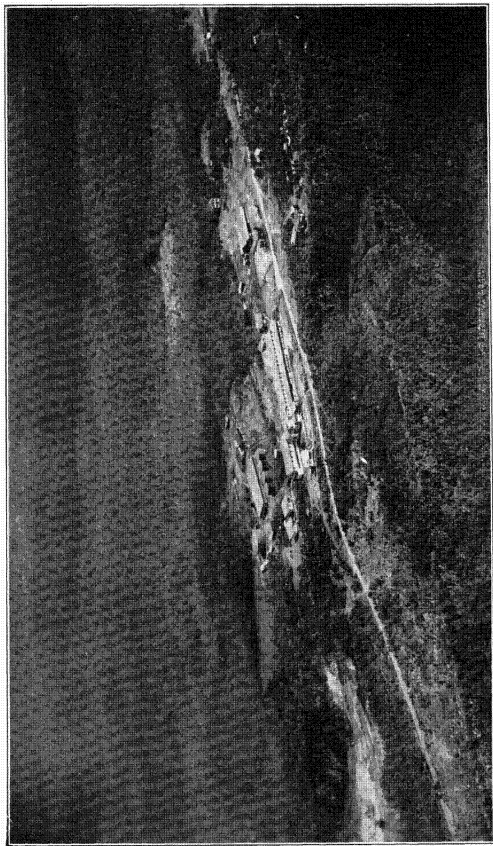
The big inner temple was entirely covered in olden days by a huge grass hut. This temple is said to be one of the oldest in existence, it having been built by Paa'o in the 11th Century. Near it one may still see holes at regular intervals where sweet potatoes were planted. In some unaccountable way, the roots go down through many feet of the rough cinders until they find moisture. We also find pineapples which have survived from year to year, though their state is so wild that they bear little resemblance to the beautiful cultivated fruit which we know.

We are now within a few miles of the last of the chain of craters which we visited from Kilauea. The National Park service expects soon to install a road connecting this section of Puna direct with the volcano.

Reversing our direction, we follow the coast road to the northeast, and after a very pretty drive through country of a particularly isolated aspect, we arrive at the village of Kapoho, in the vicinity of which we find much of interest. *Makai* of the road, we follow a trail for nearly a mile to a hot spring, located in a beautiful and wild setting of tropical foliage. The water is crystal clear and perfectly still, and we can see far down into the depths. Though once popular, the place is isolated and is now seldom visited; so we will linger to take a swim. We find the water to be not hot but pleasantly warm, and enjoy ourselves immensely until, happening to rub against an old *hala* root under water, our imagination gets to work and we paddle for the shore in haste.

HAWAII TO-DAY

Mauka of the road, we see a group of craters and find, deep in the midst of them, a pretty green lake, surrounded by palms, bread-fruit, and *hala* trees. The lake literally swarms with goldfish. On my first visit there I found an old rowboat in which were more than a dozen of them. Thinking they had been caught by children, I very kindly emptied them back into the water. Coming up to the Lyman home a little later, I stopped to talk with Mrs. Lyman, who had just returned, and I mentioned the goldfish. "Yes," said she, "they are a terrible pest. We have tried to destroy them so that we could stock the lake with edible fish and frogs, but without success." I didn't mention my assistance to the fish.



The Volcano House situated on the bluff above the volcano and a safe comfortable home from which to enjoy the beauties and wonders of the most interesting of our National Parks.



The giant fern, which flourishes in great numbers in the forests on the island of Hawaii. Only the top of the plant is shown here. This plant sometimes has a diameter of three feet and a height of thirty feet.

CHAPTER V

HISTORY—CONTINUED

THE king of the island of Hawaii, old Kalaniopuu, died in the spring of 1782, after awarding the succession with the advice of the chiefs to his son Kiwalao, and the second place in the kingdom to his nephew Kamehameha. This last assignment carried with it the custody of the ancestral war god and the care of his *heiaus*. After the usual redistribution of lands among the chiefs, which followed the accession of the new king or *moi*, war broke out among them in which the newly appointed ruler was slain. Kamehameha thereupon, after some preparation, carried the contest into the territory of the rebellious chiefs on the windward coast, but without success. A year or two later, he renewed the warfare without gaining any advantage. During the intervals when peace prevailed, he retired to his home in Kohala and is credited with many improvements in the land such as water, tunnels, and irrigation ditches, some of which are still in existence.

An expedition to Maui, commanded by Kamehameha's younger brother, ended in failure. Maui was at this time under the command of Kahekili, a chief who, more by craft, intrigue, and insidious propaganda than by force of arms, was able to bring Lanai

HAWAII TO-DAY

and finally Oahu and Molokai under his control. His reign was cruel in the extreme, but plots against his life all ended in failure.

Contact with Europeans was renewed in 1786 by the arrival of the *King George* and the *Queen Charlotte*, commanded by former lieutenants of Captain Cook. These vessels were soon followed by the visit of La Pérouse, a French explorer with two frigates. From this time on, calls from vessels engaged in various trade in the Pacific were fairly numerous. It is probable that Kamehameha profited to a greater extent than any other chief in this trading and it is certain that he was able from time to time to acquire from these traders and explorers firearms, iron daggers, and swords, and even a small cannon or two which were to play an important part in his conquest of the Islands.

It was in 1790 that the incident known as the Olowalu massacre took place. The *Eleanor*, Captain Metcalf commanding, was trading in Maui. After the theft of a small boat and the murder of the sailor sleeping in it, Captain Metcalf waited until the water was covered with canoes of trading natives, ignorant and entirely innocent of the theft and murder, and opened with a broadside, killing more than a hundred Hawaiians. He then sailed to Hawaii, where he awaited the return of his son, who was commanding a smaller vessel, the *Fair American*. This vessel, however, was captured by the natives at Kawaihae, beached, and stripped of all metal and other articles of value, and all the crew were killed with the excep-

HISTORY—CONTINUED

tion of one, Isaac Davis. On the same day, John Young of the *Eleanor* went ashore and was detained by Kamehameha to prevent his taking back knowledge of the *Fair American's* fate to Captain Metcalf. His ship sailed without him for China, her captain ignorant alike of the death of his son and of the capture and plunder of the schooner.

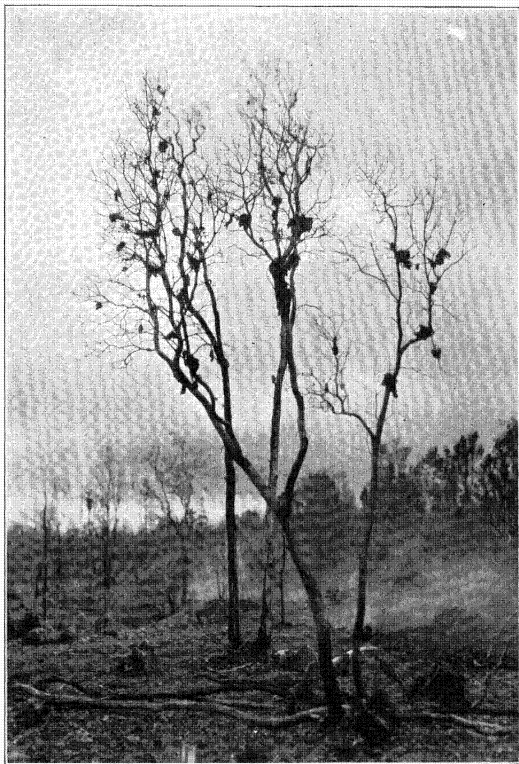
The two prisoners of war, Young and Davis, were well treated; they were given lands and raised to the rank of chiefs. Although watched for a time when vessels touched the Islands, they seem soon to have resigned themselves to accept service with Kamehameha, and rendered him great aid by training a small body of men in the use of muskets and of the two small field pieces which he had acquired. It was with their help that Kamehameha, thinking the time ripe, successfully raided Maui. He was unable, however, to take advantage of his victory at this time because of disturbances at home which broke out during his absence. His success in quelling the disorder on Hawaii, and the treacherous assassination of Chief Keoua, while the latter was on a peaceful errand, gave him by the end of the year 1791 undisputed possession of this island.

In the same year, three sailors from the *Lady Washington* of Boston were left on the island of Kauai to collect sandalwood and pearls, an occurrence which marked the beginning of trade in these articles with China. Vancouver, too, first came at about this time. His first visit and his two subsequent voyages were to prove of great importance to the

HAWAII TO-DAY

Islands. Refusing to sell firearms or ammunition, he introduced shrubs, fruit trees, grapevines, and many plants and herbs hitherto unknown, and later cattle and horses which he brought from Mexico. Trouble arose, particularly on the island of Kauai, from renegade white men, deserters from passing ships, for the most part, who were inciting the natives to acts of piracy and otherwise making themselves obnoxious. Vancouver, who was at the Islands again in 1794, was of considerable assistance in suppressing the depredations and even offered to deport seven of the deserters who were breeding trouble. But Kamehameha decided to let them remain.

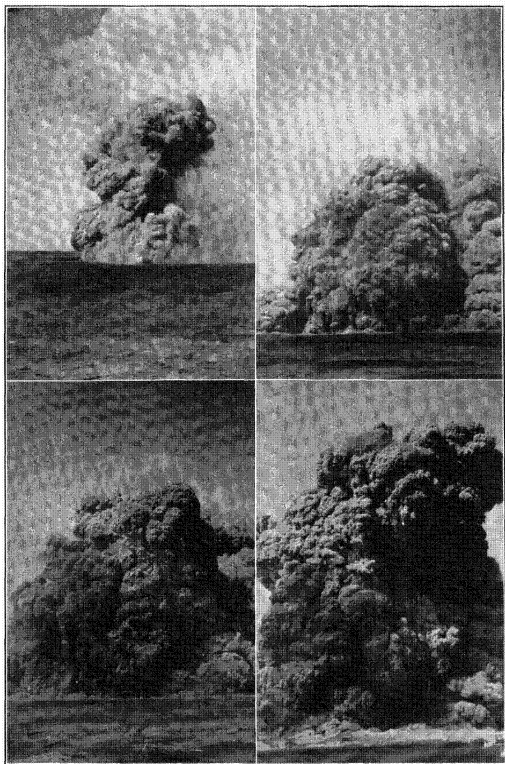
Vancouver, on this voyage, had brought in several more cattle and some sheep and took care to insure their increase by having a tabu placed on them for ten years. He also had his carpenters build Kamehameha a vessel, thirty-six feet long, which was named the *Britannia* and was the first ship to be built in the Islands. It was Vancouver, too, who first told the Islanders of the true God and advised against their tabu system. He stated he would ask his king to send teachers to them from England. Because of his many kindnesses, a council of chiefs on the 21st of January, 1794, placed Hawaii under the protection of Great Britain, reserving their rights to internal government. On the 25th, Lieutenant Puget hoisted the British flag ashore and took possession, in the name of His Majesty, George III. This annexation was never ratified by the British Government, however, nor were the missionaries sent.



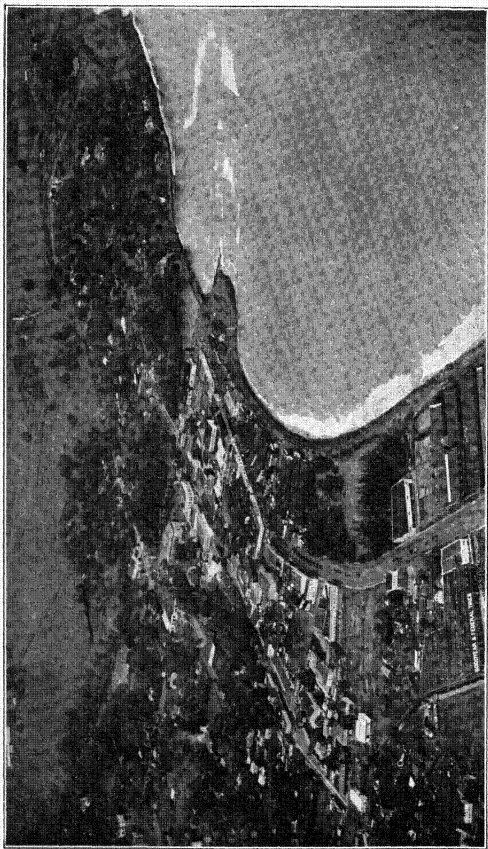
The scene of a recent flow, that of 1923. The spatters of lava cling to the trees where they were blown from the cracks in the ground. The area was still very hot in places when this picture was taken (1924); sulphur fumes and steam may be seen issuing from the ground.



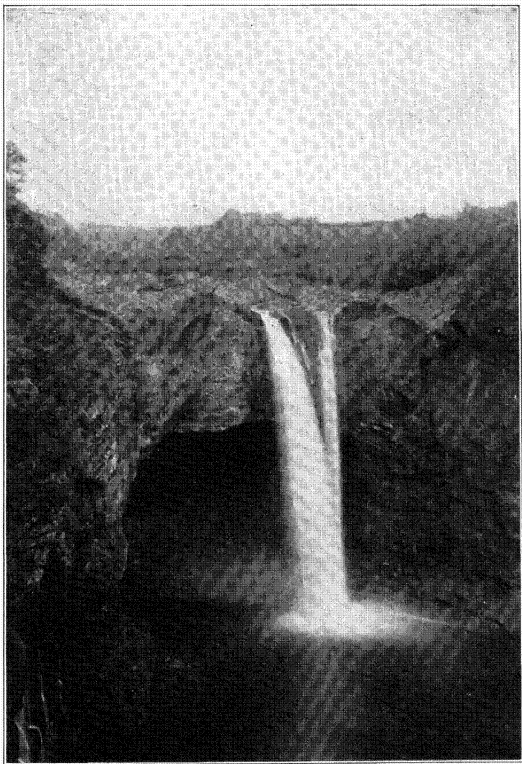
One of the strange sights to be found near the volcano, a lava tree formed when a lava flow in passing cooled around the trunk leaving what is known as a lava mold.



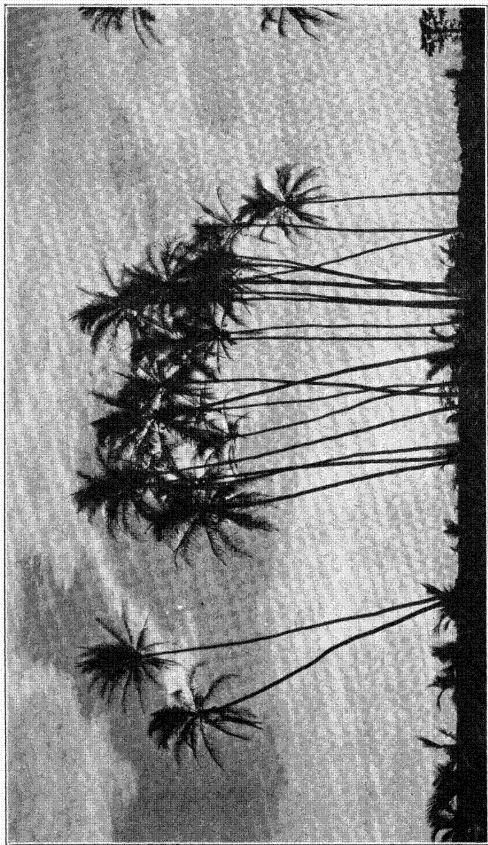
The fire pit of Kilauea in explosive action. Note the profile of "Madam Pele" outlined in the smoke, upper right hand picture. This cloud of dust, rock, and smoke rose to fifteen thousand feet, sprinkling the country for miles with a thick layer of dust. The elapsed time between taking of the first and last of these photographs was three minutes.



The city of Hilo, metropolis of the island of Hawaii. It has a good beach of dense black volcanic sand.



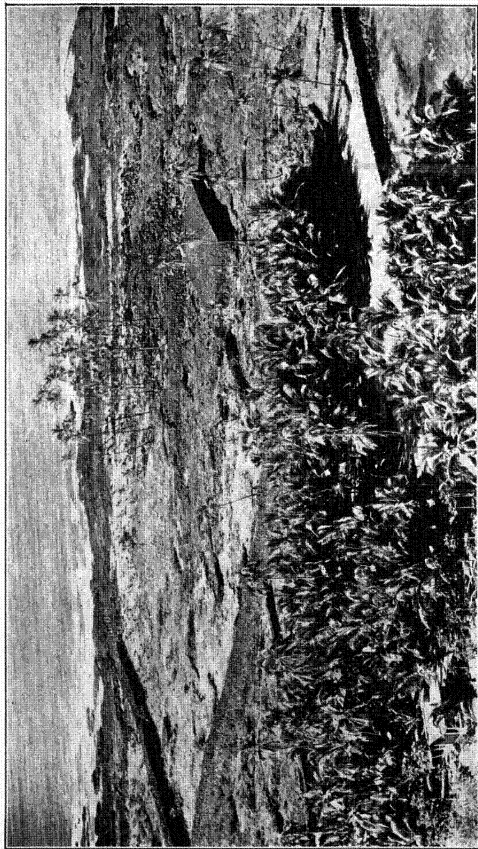
Rainbow Falls, one of the beauties to be seen near Hilo. Many legends centre around this falls and its river.



A sample of Puna scenery. This district of the island of Hawaii is noted for its many groves of coconut palms and for being the most primitive section of the island.



The entrance to a make cave, used for centuries for burials. The author declines responsibility for the "set up" which consists of a baby's coffin of comparatively recent date with souvenirs of older citizens upon it. It was with difficulty that native Hawaiians were persuaded to give up this form of burial.



The Hale O Keawe, and City of Refuge, south of Napoopoo, Hawaii, where in olden times sanctuary could be found. No matter what the crime, if the offender could reach the friendly security of the native kahunas or priests, the strongest of tabus protected him. Note the solid platform of rock on which the wooden idols were mounted.

HISTORY—CONTINUED

While these events were taking place on the island of Hawaii, the other islands had been brought under the nominal rule of Kahekili. This old chief died at an advanced age in July, 1794. Immediately, his kingdom started disintegrating. In a bloody battle in Oahu, in November, Kaeo, chief of Maui and brother of the late king strove unsuccessfully to wrest the sovereignty from the son. In this battle, the king of Oahu, Kalanikupule, was aided with both arms and men by Captain Brown of the schooner *Jackal*, who happened to be in the harbour at the time. It was largely due to this help that Kaeo was killed and his army routed. Though Kalanikupule kept his promise of payment for assistance rendered by presenting Captain Brown with four hundred hogs, he treacherously sent one of his chiefs, Kamohomoho to capture the *Jackal* and her consort the *Prince Lee Boo*. Kamohomoho succeeded in his mission by killing both captains and making the crews prisoners. Kalanikupule then planned to proceed at once against Kamehameha. He made the fatal mistake, however, of reserving the two ships for himself and his personal retinue, rather than using them for the transportation of part of his army. A successful rebellion by the sailors who were confined on board deprived the king and the queen of their ships. The two royal personages were sent ashore, while the vessels sailed away, stopping at Hawaii to notify Kamehameha of all that had occurred.

On learning of these events, Kamehameha decided that the time had arrived for action against the lee-

HAWAII TO-DAY

ward islands. Accordingly, in February, 1795, he set sail for Maui. With him went the largest force ever assembled on Hawaii, including about seventeen foreigners. He laid waste Maui. Then, proceeding to Oahu, he found the army of Kalanikupule stationed in Nuuanu Valley. Though the latter made a brave resistance, the men were forced up the valley, and with the exception of the few who escaped over the ridges to either side, they were slain or driven over the famous pali which brings the valley to an abrupt end by a drop of more than a thousand feet. The successful conquest of this island left Kamehameha in control of all the islands except Kauai and Niihau and marked a new era for the group. But while he was engaged in administering his affairs on Oahu, rebellion again broke out on Hawaii which necessitated his bringing the army back to that island where a decisive victory near Hilo removed all further opposition to his reign.

Though Kauai did not come under Kamehameha's control at this time, and in fact was not ceded to him until 1810, its ruler, Kaumualii, sensible of the fact that he could not offer effective resistance to Kamehameha, spent the years between the conquest and the annexation of Kauai in quietly and wisely administering his own domain. He finally acknowledged Kamehameha as his feudal lord and offered his islands to him. Kamehameha, who twice had prepared to take Kauai and twice had been prevented, first by a storm and later by the plague of 1804, permitted him to hold them in fief during his lifetime on

HISTORY—CONTINUED

condition that he acknowledge Kamehameha's son, Liholiho, as his heir. During these years, all Kamehameha's energies were directed to consolidating all power in his own hands, redistributing land to his retainers, and encouraging agriculture. He was wise enough to break the old system of district chiefs, apportioning land in detached pieces, curtailing in this way the power of the chiefs. By holding many of the more warlike in his personal train, and by employing many spies, he avoided the pitfalls which had ruined other would-be conquerors. Governorship of the separate islands was given to men whom he could trust. His sane regulations and his rigid suppression of brigandage and murder made possible the spread and expansion of peaceful pursuits, and his reign seemed likely to build up a population that had been ravaged for years by almost continual warfare and still further reduced by the pestilence which in 1804 carried off more than half the people of Oahu alone.

During the twenty-four years of Kamehameha's reign which terminated only with his death in May, 1819, he succeeded in establishing a reign of peace and, what is more important, the habits of peace. It was during this period that the sandalwood trade developed, a trade which was in a few years to strip the Islands of this wood. The art of distilling was introduced early in the century and was practised by all the chiefs for a time and the product indulged in by the king himself. When the evil results became noticeable, however, Kamehameha finally abstained personally and gave orders that distillation should

HAWAII TO-DAY

cease. The *ki* plant (now called *ti*) was the base, and the product which is easily obtainable again since the days of prohibition is known as *okolehao* or briefly *oke*.

During this period Russia apparently flirted with the idea of seizing the Islands. Between the years 1809 and 1817 several vessels from that country visited them, built forts on Oahu and Kauai, the ruins of which may still be seen on the latter island, and hoisted the Russian flag. On the advice of John Young, Kamehameha built his own fort to command Honolulu Harbour and further protected it by mounting two guns on Punchbowl. Russian aggression soon ceased without bloodshed and the forts were abandoned.

In 1819, at the death of the king, Liholiho ascended the throne as Kamehameha II, having been left the title of *moi*, or king, by the will of his father. The new ruler, however, too fond of his *oke* and lacking the masterful qualities of his predecessor, was fortunately not left in entire charge. The Queen, Kaahumanu, who had been acting as guardian, was made premier with power equal to that of the king.

It is interesting to note at this time that, though Kamehameha I died in the faith of his fathers, belief in the old religion, and especially in the need for the tabu, had been steadily on the wane. Many of the chiefs had long since ceased to believe, and the occasion of the king's death was immediately seized by them as an opportune moment for the abolition of the system. Though herself against the tabu system,

HISTORY—CONTINUED

the queen, Kaahumanu, did not regard the time as ripe for the plan. A few days later, however, she openly proposed this to the young king, but he, trained in idolatry by his father, withheld his consent. Several of the tabus were then broken by the queen, without harm, and soon after, she persuaded the king to add his approval, which he did by openly eating with female chiefs, breaking one of the oldest and strictest of tabus. The ancient religion was at an end, but there being nothing at the time to replace it, its abandonment operated to remove the last restraint on conduct, and revelry and license prevailed. Temples were torn down and heaps of idols burned by the mobs, some of which were led by the priests of the old faith.

Agreement on the abolition of idolatry was not unanimous. A young chief, Kehuaokalani, became leader of the idolaters and disregarding all overtures of peace, advanced against the army of the King, the battle taking place a few miles north of Kaawaloa, Hawaii. The issue was not long in doubt, as the overwhelming superiority in firearms of the king's party soon purchased the victory. Kehuaokalani was killed in action, and a few moments later his wife, Manono, who had, throughout the engagement, fought bravely by his side, also fell, mortally wounded. This decisive victory in December, 1819, was the one thing needed completely to overthrow idolatry. When seen that the idols were of no aid even to those fighting in their defence, the people in mad rage destroyed them all and slew many of the priests. Al-

HAWAII TO-DAY

though now without a religion, old religious rites and superstitions held on and for many years were practised by some of the people in secret and indeed had considerable influence on the natives' conception of Christianity.

It was just after the events recorded, that, in April, 1820, the first missionary company arrived from Boston. The history of their work, though it is almost inseparable from the profane history of the Islands, will be dealt with in a later chapter.

Liholiho continued to be irresponsible and to spend all his time on drunken parties, choosing his companions and councillors from among the lowest class of whites. A striking example was given during the anniversary of his accession to the throne. The occasion, as was customary, was one for much display and pageantry. But while his queens participated in a parade, the pomp and splendour of which had never been excelled, he led a band of nearly naked and drunken followers riding bareback around the city, followed by a nondescript escort of half a hundred men. His time was spent in travelling from place to place in the kingdom levying heavy taxes to meet his excesses, and in running, despite this extortion, steadily into debt.

Inspired, apparently, by curiosity and love of travel, Liholiho now decided to visit England and the United States. Accordingly, accompanied by his queen, Kamamalu, and by a group of chiefs, he embarked on November 27, 1823, in the English whale-ship *L'Aigle* for England. On landing, it was found

HISTORY—CONTINUED

that less than half the twenty-five thousand dollars entrusted to the ship's captain was left for the king's use on his travels. The king and his party were made the guests of the country and were wined and dined by the British nobility. Very susceptible to foreign diseases, the entire party became the victims of an epidemic of measles, and though most of them recovered, the queen died and was soon followed by her husband.

While these sad events were taking place in England, the nation suffered a great loss in the death of Kaumualii, "king" of Kauai and Niihau. By his will, and in accordance with his agreement with Kamehameha I, he gave the succession to King Liholiho. Upon Kaumualii's death, however, insurrection broke out in the island which it was necessary to suppress by force of arms. An army from Maui and Oahu met the rebels on August 18, 1824, and decisively defeated them. After the rebellion, the island was treated as a conquered province, the lands being redivided among the loyal chiefs. A famous warrior named Kaikioewa was made governor.

CHAPTER VI

AN AERIAL JOURNEY—CONTINUED

LET us consider ourselves back at the volcano and ready to continue our voyage by air. The day turns out clear and cloudless, the type of day on which volcano flying is the most dangerous, for the sun, beating down on the various shades of volcanic lava, sets up unequal currents of air which, meeting the breezes from Mauna Kea, cause a variety of “bumps” unequalled in the Islands. Because of this condition, we lose no time in putting the crater behind us, flying out over the Kau desert southward to the ocean.

The desert is an interesting sight. Perfect volcanic cones appear every now and then, some of them showing evidence of old volcanic flows. Here and there we note long earthquake cracks, from which the issuing steam gives evidence of the nearness of the internal fires. From the 4,000-foot elevation at the volcano, we gradually lose altitude until we come to the bluffs at an elevation of about eighteen hundred feet. Here the ground falls away abruptly to a low plain which leads to the sea. Following the coast to the southwest we find much to interest us. There is the big lava flow of 1823 as it issued away back in the

AN AERIAL JOURNEY—CONTINUED

mountain and led directly to the sea, where it poured from high cliffs. In no way but from the air can the immensity and awfulness of such huge flows be appreciated.

The small fishing towns of Punaluu and Honuapo are now behind us, and we are approaching the huge promontory known as Ka Lae or South Cape, the most southern point of the island. Here the ground seems to have been untouched by volcanic flows since the time the archipelago emerged from the sea. A big arid plain lies below us, leading by easy stages up toward the mountains. On the point, an ideal natural landing field is apparent, nearly a mile square. This is an excellent place to stop and fish, if one comes by air. The fish are many, of all colours and sizes, and can be plainly seen in the clear water off the western side of the cape, where abrupt cliffs lead down to the waves. The field is about fifteen miles from the round-the-island road; so access to it on the ground is none too easy.

Along the cliffs a person can pick up many fair-sized pieces of the pretty semi-precious jewel known as the olivine. This jewel is of volcanic formation, and is found to some extent around the volcano itself; here on the south coast, however, the samples are often much larger. The olivine is collected and sold for considerable sums by Honolulu jewellers, mounted in rings, brooches, and other forms of jewellery, usually in combination with diamonds.

The sea along our way to South Cape has looked pretty rough, and the strong winds have made flying

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a bit uncomfortable. Once past the point, however, and travelling northwest and then north up the Kona coast we are in the lee of the island, and the air is breathless and the water serene. A big and interesting lava flow adjoins South Cape, that of 1868. Two or three other flows of various dates are also distinguishable before we arrive at one of the most interesting sights in the Islands, Hale O Keawe, the City of Refuge at Honaunau.

It is an enclosure which measures seven hundred and fifteen feet by four hundred and four feet, the walls being fifteen feet thick and twelve feet high. In the interior is a solid mass of stones well laid, one hundred twenty-eight feet by sixty-four feet and ten feet high once used as a platform on which the wooden idols were placed. The enclosure was a sanctuary for any and all in danger, regardless of their offense. If a man committed murder and reached the City of Refuge ahead of his enemies, he was safe, protected by a rigid tabu. After a week or two of residence, he was free to go unmolested about his business.

Near by are some impressions in the solid rock that are generally spoken of as footsteps. Though they do look remarkably like footprints, they are probably the result of bubbles in an ancient lava flow. Here also is an ancient Hawaiian checkerboard or papa konano outlined in solid rock, and a little farther along, a careful search in the cliff reveals a *make* or burial cave, that has been used for that purpose up to within a very few years, as evidenced by the bodies

AN AERIAL JOURNEY—CONTINUED

within, many of which are buried in wooden, black-clothed coffins.

A few miles up the coast we arrive at the town of Napoopoo on Kealakekua Bay. At this place the *heiau*, at which Captain Cook was worshipped as a god, still stands in an excellent state of preservation. It was across the bay at a point called Kaawaloa that the famous navigator lost his life, and it was at a small *heiau*, not far away, that his flesh was stripped from the bones and burned. A monument now marks the spot at which he was killed, and the small plot of ground inclosing it is cared for at the expense of the British Government.

The cliff facing Kealakekua Bay is honeycombed with caves which were used for burial, one section being reserved for the nobles while the balance was allotted to the commoners. Most of the caves have been sealed up and well hidden. Others can be reached at considerable risk by ropes lowered over the cliff. The bodies of the nobles are in many cases well preserved in a mummified condition, wrapped as they are in old island tapa cloth. There is a belief current that somewhere in this cliff is hidden a considerable treasure in gold bullion; but as yet no one has been able to recover it.

We are now in the centre of the coffee country, and groves of the small coffee tree dot the hillside here and there. Napoopoo has two coffee mills which are interesting to visit for those who would know the process of preparing the product for market. We, however, shall not take the time to do so on this trip.

HAWAII TO-DAY

As we progress up the coast, we run across a peculiar sight—many platforms of stone on various levels under a high cliff. After many inquiries on my part, the information was given me that this is a burying ground, a variation from the usual ancient custom of burial in caves. It is quite possible that here lie the bodies of many warriors, as it was at or near this spot that Kekuaokalani defended in vain the rejected ancient gods. Here he and his faithful wife, Manono, fell, mortally wounded by the royal army of Kaahumanu.

We continue our flight north. The coast district over which we are now passing was thickly populated in olden times, and the ruins of many villages and *heiaus* are plainly visible from the air. It will seem odd to the uninitiated that the centres of population were always on the coast where usually nothing exists but bare volcanic rocks. The reason is found in the old form of land grant which gave a man a narrow beach frontage, the land usually stretching from the shore to the top of the mountain. Thus a family would have a beach home from which to conduct their fishing operations and would carry on agriculture on the more fertile ground, *mauka*.

Now we have come upon an odd sight for this country. Just ahead of us and below are two parallel walls of rock, absolutely straight, disappearing into the distance, like a railroad track of extremely wide gauge. This is an ancient highway, the method of whose building is very interesting. During construction the chief or king would post himself on a high

AN AERIAL JOURNEY—CONTINUED

point and by sighting on the distant horizon would direct the placing of the stones by thousands of workmen, holding to the straight line without thought of obstacles. Thus these parallel lines might lead to a cliff or a steep hill. Instead of being built around it they were made to pass straight over it like an old Roman road, regardless of the extra labour and time involved. Usually, when these lines were finished, the space between was filled with loose rock and then soil, providing a runway on which the king's fleet messengers could travel very swiftly from one section of the country to another.

Soon we sight the little harbour at Kailua. This was one of the favourite homes of the kings of Hawaii, and it was here that the ancient gods were denied and the tabu system broken. It was here, too, that the first missionaries landed, in 1820. A quarter of a mile up the hill, the homes of the three missionaries who settled on Hawaii may still be seen, a mass of ruins, nearly hidden by the cactus and algaroba.

Near by is the entrance to the famous Liniakea cave, in olden time a popular place of refuge. One can travel either *mauka* or *makai*. The lower cave may be followed for some distance with care, the cavern opening up to commodious proportions at times, but finally ending in a pool of icy water, by diving through which a good swimmer may reach a continuation of the cave which leads on to the sea. The writer did not consider himself good enough as a swimmer to prove this. In the town proper and facing the beach stands the old royal palace, beautifully built but now

HAWAII TO-DAY

in terrible condition for want of repair. The surrounding palms furnish a pretty setting for the building which, it is really a pity, remains unoccupied and is rapidly falling into decay. Near by, the royal swimming pool is still to be seen.

Flying on up the coast, we soon come to a stretch of country cut up for miles by various lava flows which stretch from their source far back in the mountain clear to the sea. In this wide expanse of lava we may note various habits of the volcano better, perhaps, than anywhere else on the island. Ancient lava river beds are apparent in several of the flows. These are nothing more or less than the main arteries from which the flow spread. Where these lava tubes were close to the surface, the crust at times broke through after cooling, leaving the deep gullies or channels that we see. The territory ahead and to the right looks like an inferno indeed, the lava shining jet black under a light rain, while the centres of the lava streams are outlined in white owing to the presence of sulphur.

At the head of one of the lava streams we see the cones responsible for all the desolation, a few small hills from which the red rock poured forth in a steady stream for months at a time. The description of the Aleaka Flow by residents makes one wish one could have been present at such a wonderful demonstration of the powers of nature. High upon Mauna Loa, the red stream broke forth, the sky at night being bright as day for miles around and the fiery river visible at sea as far as the eye could reach. This flow was a

AN AERIAL JOURNEY—CONTINUED

very rapid one, travelling at a speed greater than thirty miles an hour. It had but to touch a boulder, and the boulder, even though it weighed many tons, would float out upon the lava stream as a cork floats on water and be carried out to sea. Visitors by boat to the flow could not come within a mile of the shore, as the water was almost at the boiling point. Dead fish floated everywhere killed by the heat.

Before heading into the interior, let us glance north along the coast. For miles we see nothing but flow after flow of lava as far as the Kohala Hills. A short distance inland, we find the Hine Ranch, the main buildings and the owner's residence grouped in beautiful surroundings at the foot of a large knoll.

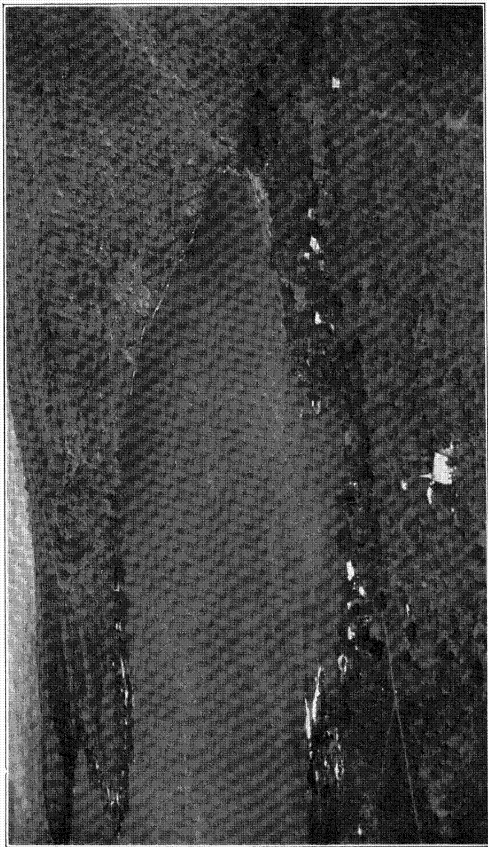
We take our way across country gaining altitude as rapidly as possible. Rising above the clouds to 9,000 feet, we cross the island between the two big mountains, reaching the shore again just north of Hilo. Let us follow it to the northwest. One of the first objects of interest is the Onomea Arch, a passage through a promontory. Beyond this we find the entire coast precipitous, though occasionally cut by gullies or valleys leading toward the mountain. Several of these are bridged by high trestles for railroad and highway and also by high trestle flumes for the transportation of cane to the mill. For a long stretch we find Australian ironwood planted in a thick band near the cliff to act as a windbreak for the growing cane. We pass Pepekeo, Honomu, Hakalau, Honohina, Papaaloa and many smaller places and find ourselves above Laupahoehoe, site of many famous

HAWAII TO-DAY

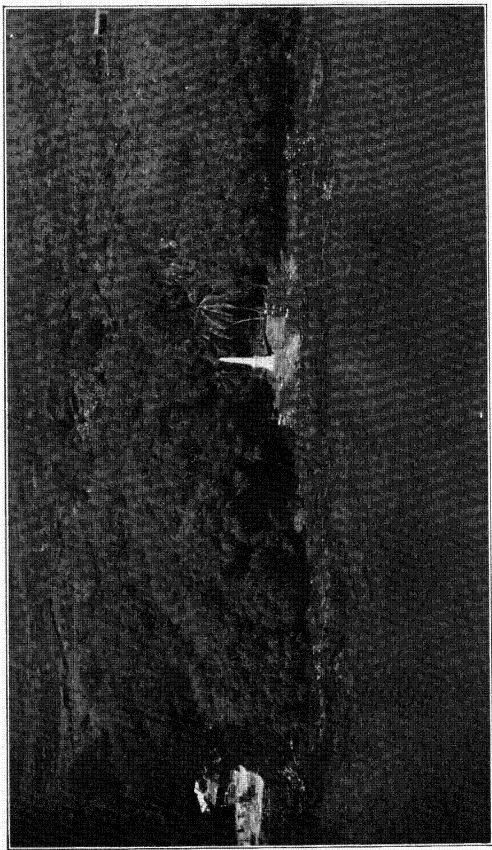
heiaus. Beyond this town we pass rapidly other coastal towns, Ookala, Kukaiau, Paauilo and Paauhau. Honokaa lies just ahead. Here an interesting feature of the sugar industry is to be seen. Cane is transported by an overhead cable from the fields which reach high up into the hills, to the mill, which is on the cliffs above the water. After the raw sugar has been made and bagged it is transported to the waiting ship by an aerial cable stretched out to the ship's anchorage, the sea being too rough to attempt a landing.

We pass on along the coast, inspecting in turn the pretty, isolated valleys of Waipio and Waimanu and the smaller gulches which break the otherwise precipitous *pali*. Here and there waterfalls delight the eye. We leave the hills and fly rapidly to Upolu Point gaining altitude for our dash across the channel.

Almost our first sight as we reach the island of Maui is the extinct volcano Haleakala which rises rather steeply from the ocean. We approach it from the east, flying at 11,000 feet to allow ample clearance, for the upper rim is 10,000 feet high. The crater covers an immense area, the dimensions being seven and one half by two and one third miles with a total circumference of more than twenty miles. It is by far the largest in the world. Looking across it, we find that the western rim drops off almost vertically for 2,000 feet to the bottom of the pit which is covered with lava flows of all ages, distinguishable by their variations in colour. From the floor rises a group of small cones, some of which range well above



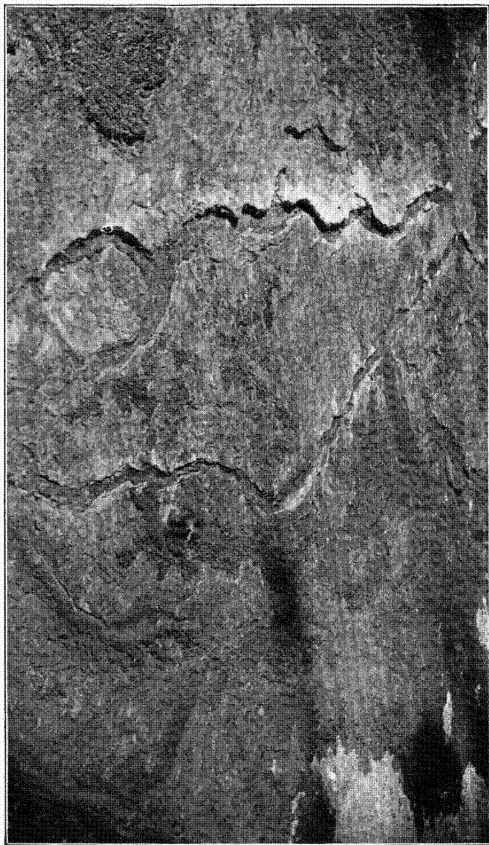
Kealakua Bay, Hawaii, which witnessed the death of Captain James Cook. The monument to his memory may be seen on the far side of the bay at the spot where he died. It was in a small heiau at Kaawaloa Bay, the small indentation in the upper left hand corner that his flesh was stripped from his bones and burned, the bones being retained for worship in accordance with the Hawaiian custom. The town of Napoopoo lies in the foreground.



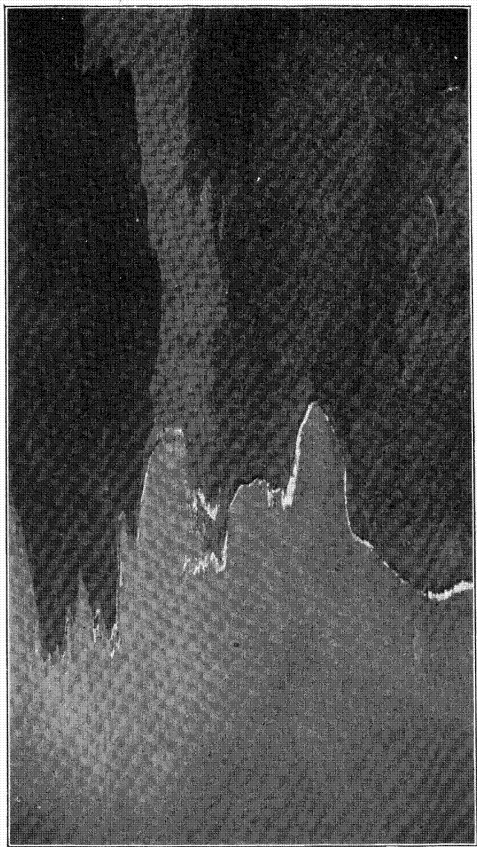
Captain Cook's monument, a memorial to the famous navigator carefully preserved by British citizens.



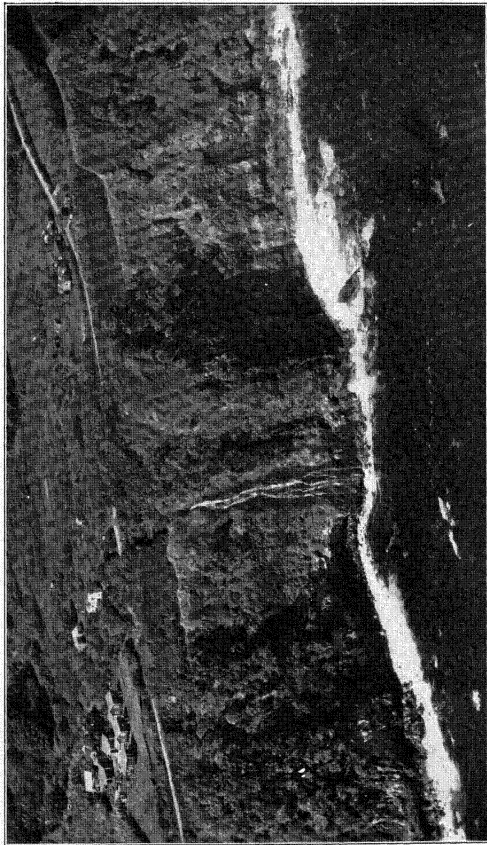
All that is left of the three houses built by the first missionaries who established themselves at Kailua, Hawaii.



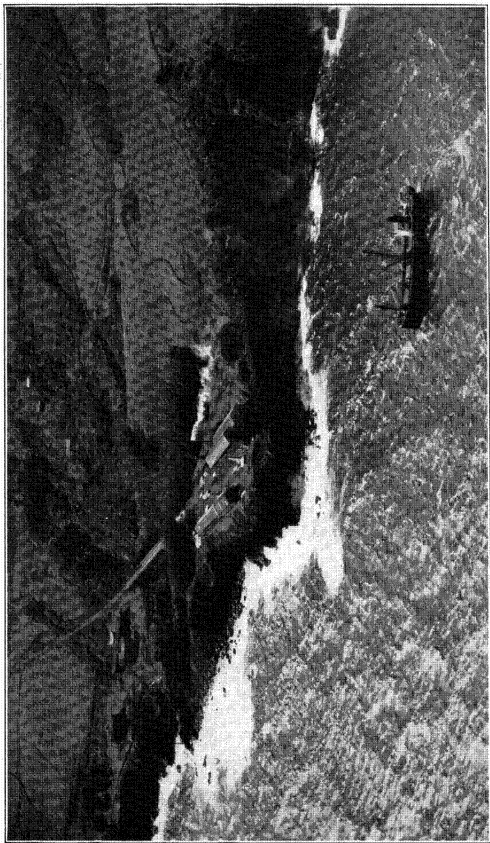
Looking down on a lava flow we can see the arteries or channels which fed the flow. Where the arteries are deeper, lava tubes or caves are formed as the last of the flow passes through.



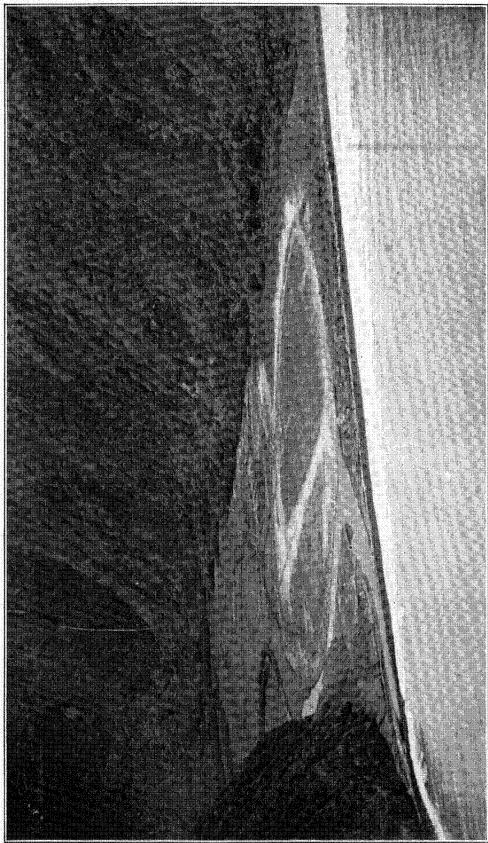
As we fly up the Kona coast of Hawaii, many lava flows are to be seen stretching from the slopes of the distant mountain to the water's edge, each flow differentiated by some slight variation in colour or form of lava.



The windward coast of Hawaii (Hamakua District). Here the railroad follows a cut in the rocky cliff for miles.



Loading sugar at Honokaa, windward Hawaii. In this section the cane, grown on the slopes of Mauna Kea, is transported by cable or overhead trolley down the hill to the sugar mill. When the sugar has been produced it is swung across to the ship by cable as illustrated, the water being too rough to permit the ship's docking on this coast.



Waipio Gulch, windward Hawaii. Here and in other isolated gulches near by are produced large quantities of poi, the chief native food, and some rice. Waterfalls are common here; many which look like falls from a distance are found to be water courses which have worn a deep groove down the almost perpendicular pali.

AN AERIAL JOURNEY—CONTINUED

five hundred feet. Directly below us there is a gap in the rim through which we can see one of the last great flows which emptied itself into the sea; and to our right, as we cross the crater, the Koolau Gap cuts through the wall and lets the clouds come creeping up into the floor of the bowl. It was these two gaps in the walls, caused, no doubt, by an earthquake or land fault, which preserved to us the crater in its present form. Had it not been for them, the molten lava during the last eruptions would have filled the pit and the erosions of the ages would have worn the volcano into the semblance of an ordinary mountain.

The trip to the volcano by horseback, taking two or three days, is very interesting, I am told. I am unable to describe it from personal experience, but refer the reader to the very excellent description contained in Castle's "Hawaii, Past and Present."

Leaving Haleakala behind us, we journey down the coast to the seaport of Kahului, a good-sized town which serves as port for Wailuku, seven miles to the west. These two towns are in the big valley which connects the lower slopes of Haleakala with the mountain in western Maui. In past ages, these two mountains formed separate islands which later became joined by the lava flows of Haleakala, aided by coral formations and by drifting sand. To-day this is a very fertile district, and it is this extensive valley which is responsible for the designation of Maui as the "Valley Isle." It was near the town of Wailuku that the decisive battle was fought which won Maui to Kamehameha's standard. In fact, it was this

HAWAII TO-DAY

battle which is responsible for the name Wailuku, for the word means "water of strife," the stream above the town having run red with the blood of those killed.

We shall land at the Municipal Field near Kahului, which the wide-awake citizens have been kind enough to provide, and make a few excursions by car. On our first trip we are to cross the valley to the leeward side of the island, hugging the cliffs and holding on to our hats as we pass the gustiest points until we reach the town of Lahaina, interesting chiefly for its history. Once the capital of the group, this village contains the oldest white settlement. In the old days it was exceedingly prosperous, being the favourite port for whalers and other trading ships. It was owing to this fact that vice was rampant in this section, causing Lahaina to be the centre of *pilikia*, or trouble between the government and outsiders. Above the town, the old Lahainaluna Seminary, established in 1831, still holds its position as a successful industrial school. The home of the early missionaries is still maintained and used as a social centre. The road leads around the base of a mountain, revealing beautiful slopes covered in part by flourishing fields of cane.

Returning to Wailuku we take to the hills, motoring swiftly up the little valley called Iao at the end of which stands a sharp peak called the "Needle." The valley broadens out after we pass the entrance and from its head other valleys lead in several directions. Were we in the 'plane we should find that from above

AN AERIAL JOURNEY—CONTINUED

the whole mountain group looks like a huge dome cake which has split from the heat, allowing gullies to run from the centre in several directions. The highest point, known as Puu Kukui, is 5780 feet above sea level.

The head of the valley is almost always either under rainfall or wet from dew or mist, making the earth very slippery, and discouraging exploration by foot. I am told that only a few men have entered the valley, penetrated it, and emerged through some other gorge. The wind entering this valley seems to flow through to another which opens at right angles to it, so deflecting the gale that, in flying down the leeward side, one of the worst "bumps" in the Islands is encountered.

We leave the motor car for the plane again, and pass on down windward Maui, a section which can be visited only by horseback, as there is no road. Here and there is a small isolated vale said to shelter some of the most primitive of the native Hawaiians.

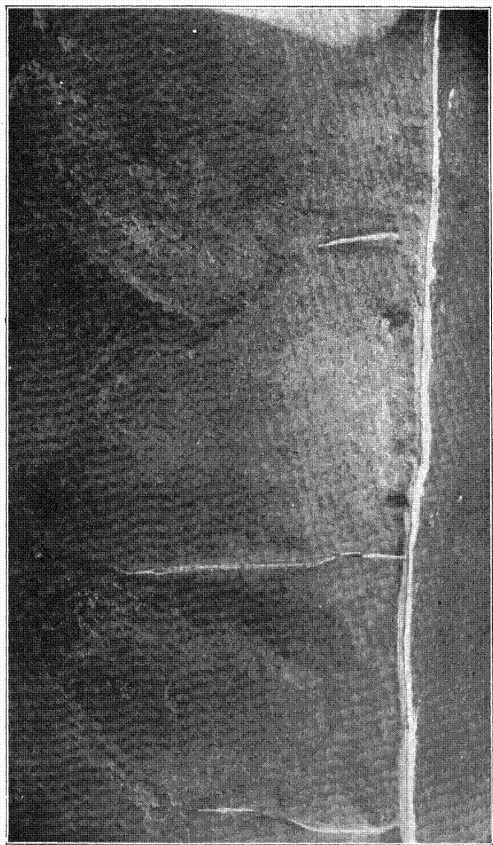
Since the channel between Maui and Molokai is not wide, we need not attain much extra altitude for safety. Now we are past the fertile eastern tip of Molokai and are flying toward the west along the northern coast of the island, past the most impressive of the *pali* scenery we have yet seen. The mountains, which here rise to more than 5,000 feet, seem in places to have been sheared off straight into the sea. Several beautiful falls tumble down them and two large and almost inaccessible valleys, Pelekuna and Wailau, make deep indentations. Though these valleys lie

HAWAII TO-DAY

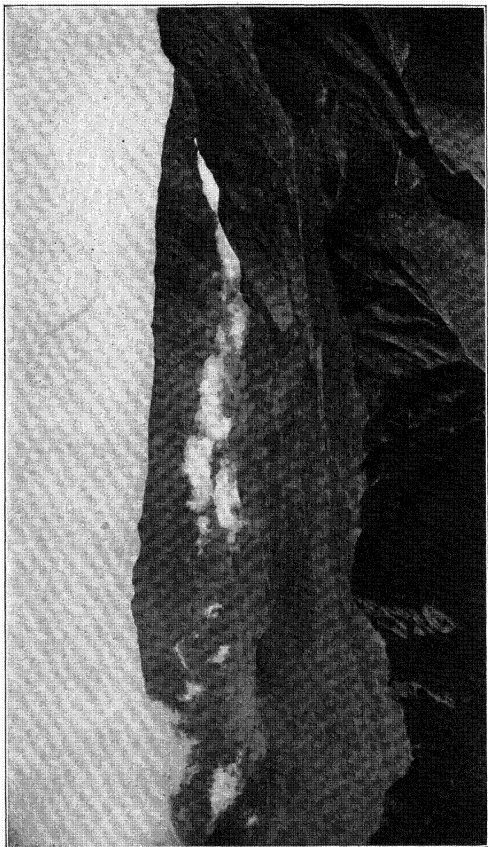
next to each other, no trail has yet been found to surmount the high ridge which separates them. The sides are so precipitous that when the chief of water resources of the Geological Survey visits one valley in the course of his periodic inspections, he must recross the island to the approachable leeward coast, and, from farther up the beach, return to windward and enter the next valley on its opposite slope.

We have now come to a long triangular spit which projects to windward from the perpendicular cliff. This is Kalaupapa, the leper settlement. Cut off on one side by an angry sea, from which landings may be made only in a small boat, and on the other side by a frowning mountain with a single difficult and well-guarded trail, the settlement is safe from intrusion and the public well protected from the spread of the dread disease. The colony is well housed, an excellent hospital and staff have been provided, and the inhabitants seem happy and contented. The Army Air Service has established a good emergency field here—— What! you would prefer not to land? All right. If you say so, we won't.

We ascend again for the recrossing of the twenty-three-mile channel to Oahu. This time we strike that island at its most eastern extremity, Makapuu Point on which a government lighthouse is situated. The view down the windward coast through the light fleecy clouds is lovely. It may be compared to the garb of a beautiful woman, "half revealing, half concealing." Through the clouds we see Waimanalo Beach, while to seaward, inside the outer reaches of



A few of the many falls and perpendicular water courses to be found on the north Kohala coast, Hawaii.



Looking into the giant crater of an extinct volcano, Haleakala, at an altitude of two miles. This crater usually seen only after a two-day trip by horse and afoot can be seen thirty minutes after leaving the landing field at Paia, by air.

AN AERIAL JOURNEY—CONTINUED

the protecting reef, the light patches of green water reveal the presence of coral gardens, those delightful fantasies of the submarine world. Off shore a short distance is Rabbit Island, said to have been stocked with rabbits at one time as an experiment. A swim I recently made out to this desolate rock failed, however, to reveal any sign of rabbits. The beach here at Waimanalo and that at Kailua, just beyond, are the best on the island, the sand being quite fine and free from coral. A section of the ground facing the beach is government reservation and during the summer months is usually occupied by some infantry regiment on field manœuvres.

Proceeding westward, we see to our left the usual *pali* formation prevalent on the windward side of the islands. Oahu varies somewhat in having her *pali* farther inland instead of dropping directly into the sea as happens on most of the other islands of the group. The large isolated mountain peak is Puu Loa. From the air it is easy to form in the mind's eye the ancient crater now represented by the main ridge and several hills. A little farther, and we may look to the left above the Nuuanu Pali, down over the city of Honolulu. The concrete road ascending the side of the mountain toward the *pali* is the only means of crossing by car the ridge which divides Oahu, though several difficult foot trails accomplish that purpose. With out present means of transportation we can hop over and back in a few moments.

We hug the top of the ridge and inspect at a distance the leeward side of the island, picking up

HAWAII TO-DAY

from this new point of view the places we left a few days ago.

We pass over Kaliuwaa Valley, a deep narrow gorge in which the *ohia* and *kukui* trees flourish. A beautiful waterfall adorns its upper reaches. Though delightful, this scene is not so entrancing from our present point of view as it is from the ground.

As we turn back to the coast once more we pass Kualoa Point, where the mountain almost meets the sea, and then the small pretty beach and cove at Punaluu until we come finally to Laie, where we find a Mormon Temple of classic beauty. Continuing on, we reach Kahuku Point where radio antennæ "radiate" in all directions, covering acres of ground.

Following the coast southward, we soon find ourselves looking down upon Waialua Bay, a favourite bathing place for those living at Schofield Barracks, and almost immediately thereafter our propellers are whirring above the town of the same name. As there is little of interest between here and Kaena Point, the westernmost tip of the island, we turn south toward Schofield Barracks. This huge military post covers many acres on the plain between the Koolau Range and the Waianae Mountains. Troops may be seen here and there engaged in drill, while below, on one of the regimental parade grounds, an infantry regiment is encamped with full field equipment, awaiting an inspection. Near Schofield Barracks lies the pleasant little town of Wahiawa, surrounded with pineapple fields. Farther south lie two big gulches,

AN AERIAL JOURNEY—CONTINUED

one of them, Kipapa, being the scene of one of the bloodiest of ancient battles.

Banking sharply, we head for Kolekole Pass and so reach the isolated west coast. As we go through the pass the wind, which seems to strengthen at this gap in the mountains, snatches the plane and seems to hurl it through with increased speed. Once through and out of the wind's influence we find that the inevitable "bump" occurs and the "sailing" is rather rough until we near the sea. The valley through which we are passing is one of the most ancient dwelling places on the island and the natives here clung to their old customs long after the rest of the island became modernized. Burial caves are to be found, and the entire region is of interest to the traveller on foot. The village directly ahead is Waianae, whose chief industry is fishing. A sugar mill is also located here. After a short flight up and down the coast, we land on an excellent field, that we may rest and prepare for another full day of aerial travel to-morrow.

CHAPTER VII

HISTORY—CONTINUED

THERE now began a series of outrages by foreigners, which seem to indicate a growing desire on the part of several governments to bring the Islands under their sovereignty. The first instance of this occurred in the interference of Mr. Charlton, the British Consul, with the laws regarding the sale of intoxicating liquors. Foreigners had been accustomed to regard Hawaii as a land without law where every excess could be indulged without restraint, and they resented any effort of the king and his government to correct this situation by prohibitory laws. Assuming powers he did not have, Mr. Charlton did his utmost to embarrass local government and went so far as to claim that no laws were binding unless approved by the British Government. The ship *Daniel* of London, Captain Buckle, arrived at Lahaina, Maui. The crew, finding that since their last visit an improvement had been made in social conditions, landed and in a rage broke into the dwelling of Mr. Richards, a missionary, and threatened him and his wife with death unless he secured the immediate repeal of the objectionable law. Natives finally drove off the sailors and the ship sailed away. This

HISTORY—CONTINUED

did not end the difficulty, however. In Gulick's "The Pilgrims of Hawaii" we read that

In January, 1826, the cruising schooner *Dolphin* of the United States Navy arrived at Honolulu and on the 26th of February a company of sailors entered the house of Kalanimoku and demanded the repeal of the law, or decree, mentioned above, and being driven away made an attempt to kill Mr. Bingham, but were finally scattered by the natives who rallied to protect their missionaries.

Two other attacks were made by ships' companies upon Mr. Richards at Lahaina, in the first of which, in 1826, Mr. Richards being absent, his house was invaded and property destroyed. In the second, in the fall of 1827, cannon balls from the ship *John Palmer* were fired at the mission house by the crew, while the captain was detained at the Governor's House.

In January, 1827, the officers of the American Board published in the papers of the Eastern States Mr. Richards's statement of the acts of violence of the crew of the whaleship *Daniel*, Captain Buckle, at Lahaina. These papers reached Honolulu in the fall and aroused the anger of Captain Buckle whose ship had touched at Honolulu. So great a tumult was raised by the Captain and his sympathizers in Honolulu that Kaahumanu called a council of leading chiefs and summoned the missionaries for an investigation. Mr. Richards was called from Lahaina to answer for the offense of having written to Boston regarding the outrages of the ship's company of the *Daniel*. The hostile foreigners were invited to make their charges against the missionaries. Their chief complaints were founded upon Mr. Richards's letter to Boston. When Mr. Richards appeared in person the complainants hastily retired. The council decided that as Mr. Richards had written only the truth, he was entirely innocent.

During these events, Captain Jones, in command of the American sloop of war *Peacock*, arrived to investigate charges that the Sandwich Islands were likely to become a rendezvous for pirates, and to collect

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debts, a considerable sum alleged to be due American shipowners. He was of considerable assistance to the queen regent Kaahumanu in the disorders mentioned and in contesting the self-assumed authority of Mr. Charlton, the British Consul. He negotiated at this time the first commercial treaty ever made with a foreign power by the Islands. Shortly after this, on December 8, 1827, the first written laws against murder, theft, adultery, gambling, and the sale of liquor were posted.

Kaahumanu, who at the death of Kamehameha II had been confirmed as regent, for the successor Kauikeaouli, or Kamehameha III, then a minor, had been having considerable trouble with Boki, governor of Oahu. The latter, being out of sympathy with the Regent's progressive government and law making, several times plotted her overthrow. It is probable that the issue would have eventually been decided by force had not Governor Boki, hard put to meet his many debts, grasped eagerly at the news of a "sandalwood isle" to the southward, fitted out an expedition, sailed away, and disappeared, leaving no trace.

Kaahumanu was on an extended tour of the Islands when news of the big storm and the probable destruction of Boki reached Oahu. His widow, knowing she would be removed from governorship, attempted a rebellion but was dissuaded by her father, who, taking charge of the fort, held it and turned it over to the Regent on her return. In April, 1831, a new governor was appointed, and with his aid Kaahumanu undertook to correct some of the evils which had crept in

HISTORY—CONTINUED

during Boki's administration. Kaahumanu served faithfully and well until her death in June, 1832.

Kaahumanu attempted to continue the custom of joint rule by appointing Kinau, a half sister of the king, as her personal successor. The king, who had fallen in with a crowd of wasters and false friends, responsible for the repeal of many good laws and a general approval to increased license and drinking, asserted his authority and before a company of chiefs declared that he was arrived at man's estate and saw no further necessity for a divided rule. To the surprise of all his cronies, he named Kinau, however, as the "Second in the Kingdom." He later named her third son Alexander Liholiho, as his heir. Until her death, most of the government of the Islands fell on the shoulders of Kinau as premier, while her husband acted as governor of Oahu and also as judge.

Several industries were started at this time, among them sugar planting and cotton and silk raising. The trade in sandalwood had appreciably diminished, and the money derived from this trade having been extravagantly squandered by the chiefs, the people had to rely more and more on the sale of stove wood and hides to passing ships. It was during this period that several schools were started, education becoming more general, particularly among the children of the chiefs. Printing presses and newspapers were established, and the Christian religion made great strides. The first census in 1832 gave the population of the Islands as 130,313.

Kinau died in April, 1839, to be succeeded by Au-

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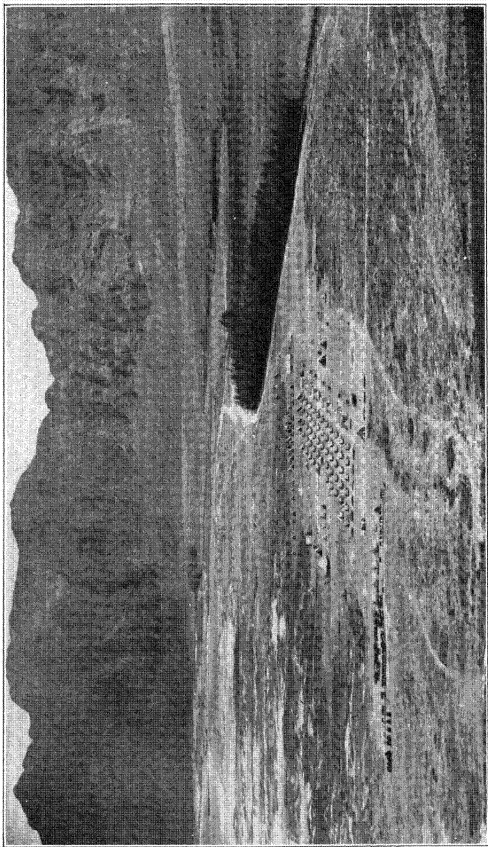
hea, niece of Kamehameha, thus continuing the tradition of a female *kuhina nui*, or vice-king.

Having been initiated into Christianity as Protestants, the king and his chiefs were opposed to the admission of Catholic priests and their teaching, which they considered to savour of idolatry, a practice which they had just discarded. This led to several instances in which foreign ship masters, objecting to what they termed religious intolerance sought to cause trouble in the Islands.

The matter culminated in the arrival of the French frigate *Artémise*, Captain Laplace commanding, which, though it may have aimed at the installation of the Catholic religion, also apparently used this situation as an excuse to seize the Islands for the king of France. Immediately upon arrival and without investigation of any kind, Captain Laplace issued a manifesto which had to be accepted within a day, and which required among other things that a building site be given the Catholics by the government, that the religion be declared free to all, and that \$20,000 be given the captain of the *Artémise* as a guarantee that these conditions would be carried out. No chance for argument was given; the councillors—the king being absent from Honolulu—were told that failure to comply would mean war. The ultimatum was complied with, much to the surprise of the French, who within forty-eight hours presented another compact which they required to be signed at once and without adequate opportunity for consideration. This latter convention prevented French-



Lying in interest with the deep gulches on Molokai's windward coast is the leper settlement, seen here from nine thousand feet. Here the inhabitants are so well cared for that it is not unusual for a cured patient to refuse to leave.



Waimanalo, Oahu. The beach, perhaps the best on the island, extends along the coast for several miles. There is a plot of ground retained here as a military reservation, on which some organization is usually to be found during the field training season.

HISTORY—CONTINUED

men being tried for any crime except by a jury of foreign residents appointed by the French Consul, and further stipulated that French merchandise should not be restricted and that no duty of more than 5 per cent. *ad valorem* should be imposed. This was aimed directly toward an unrestricted sale of liquor. Having no recourse but a ruinous war the monarch who has been hastily summoned, wisely complied and saved his country from devastation.

A very important step forward was taken in 1839 and 1840 by the promulgation, first of a Bill of Rights by the king and second by a constitution, the first written in the Hawaiian language. In 1842, the French, who in the meantime had taken the Marquesas Islands and the Society Islands, again visited these islands with the purpose of imposing further restrictions. The troubles with the French incited Mr. Charlton to further efforts against the peace of the island government with the apparent object of bringing them under the domination of Great Britain. In no way unaware of the trend of affairs, the Hawaiian Government had already taken steps to have the government recognized by the Powers, and had also requested the removal of Mr. Charlton. Recognition was first granted by the United States when Daniel Webster, Secretary of State, declared in an official letter that

the government of the Sandwich Islands ought to be respected; that no power ought to take possession of the Islands, either as a conquest or for the purpose of colonization; and that no power ought to seek for any undue control over the existing govern-

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ment, or any exclusive privileges or preference in matter of commerce.

While envoys were still on the continent endeavouring to secure recognition from England and France, the British adopted the same tactics as those used by the French. Lord George Paulet arrived with the *Carysfort* and made oppressive demands on the king under threat of war. The king, tired of these ceaseless and unjust demands and possibly being unable to meet the monetary requirements, which amounted to \$80,000, very wisely decided neither to meet them nor to resist. At the advice of Doctor Judd, his councillor, he ceded the Islands provisionally to Great Britain pending an appeal to the British Crown. This cession officially took place February 25, 1843, by coincidence on the forty-ninth anniversary of the cession to Vancouver by Kamehameha I. The British governors now immediately assumed that the Islands were a permanent British possession and proceeded on that assumption, destroying all Hawaiian flags, registering all ships under the British flag, and arbitrarily deciding all disputes in favour of British contestants. After the freeing of all prisoners and the abrogation of laws affecting vice, which again made the Islands "wide open" and as shameless as in the days of Liholiho, the king entirely withdrew with his ministers from any connection with the government, leaving the responsibility to fall entirely on the British administration.

By a clever stratagem, the king sent as envoy to Great Britain Mr. J. F. B. Marshal on the same boat

HISTORY—CONTINUED

that carried Mr. Alexander Simpson, the unrecognized British Consul. Mr. Marshal was able to place before the British Government an unbiased analysis of the situation in the Sandwich Islands.

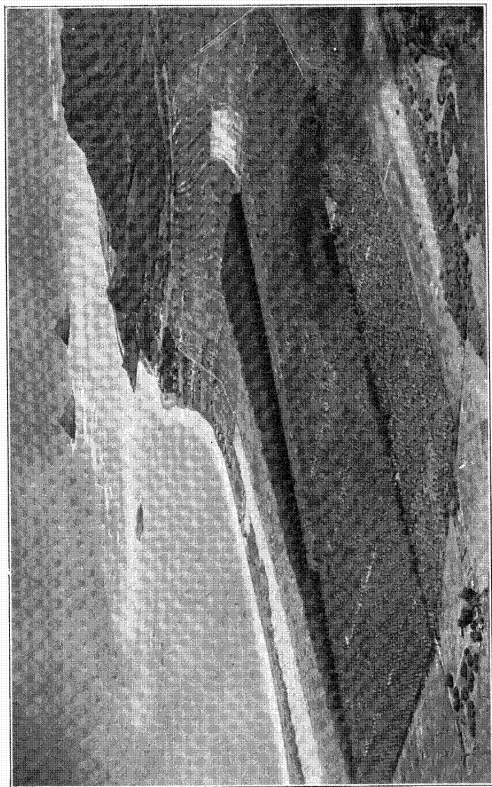
A few months later, Rear Admiral Thomas, commander of British forces in the Pacific, arrived and immediately disavowed the action of Lord Paulet, restored the government to the king's hands, and required Lord Paulet to make amends by suitable ceremonies to the Hawaiian flag. The Hawaiian flag was again hoisted on July 31st. Before the end of the period of rejoicing which followed, word was received of the complete success of the Hawaiian envoys on the continent. England and France had jointly pledged themselves to respect the independence of the Sandwich Islands. With this firm basis to build on, the organization of a stable and well-balanced government proceeded rapidly. The king made use of some of the best foreign minds available by appointing Dr. G. P. Judd as Secretary of State, Mr. John Ricord, formerly of Oregon, as Attorney General, and Mr. W. Richards, Minister of Public Instruction.

The question of land tenure was now taken up, and the first laws granting permanent possession of land were formed. In 1846, the Judiciary, which had long been a weak point in the Hawaiian Government, was permanently strengthened by the appointment of William L. Lee as Chief Justice. Though bound for Oregon from the east coast at the time, Mr. Lee was persuaded to remain in Hawaii and rendered invaluable service until his death.

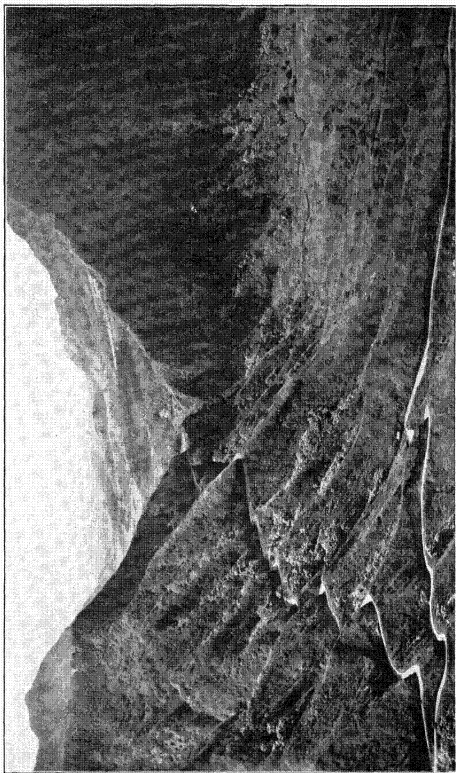
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It is not always realized that Hawaii at this time was ahead of the western coast of America in many items of civilization. Printing presses were installed in Hawaii before they were sent to California. Californians sent their children to school in Hawaii, lacking proper schools in that state. During the gold rush to California in 1848 many supplies were shipped there from Hawaii and this may be regarded as the first of foreign trade as distinguished from barter with passing vessels.

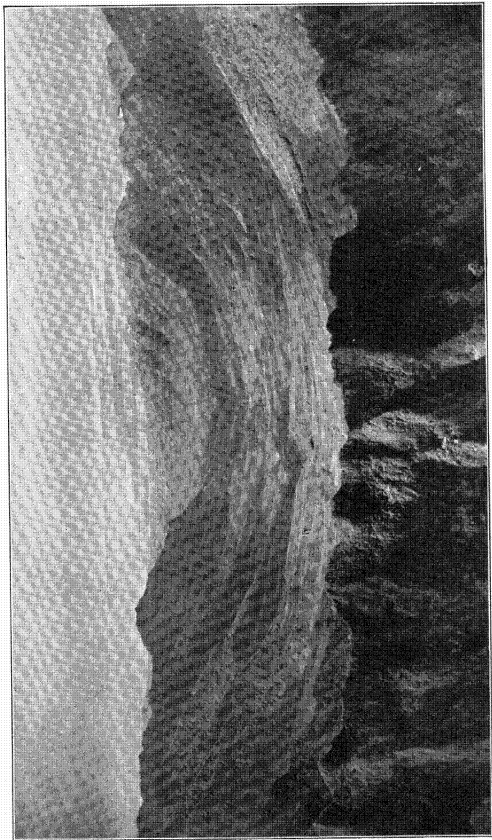
The balance of the half century was marked by several disputes with foreigners, principally the French, and by an epidemic of measles which carried off a tenth of the population. The former culminated in impossible demands by the French, which were firmly though courteously refused by the king. Following his policy of no resistance he permitted the fort to be taken and offered no opposition to Admiral Tromelin, when, in "reprisal," the latter dismantled the fort, destroyed furniture, and confiscated and took off with him the king's yacht, which, by the way, was never restored. It seemed impossible to straighten things out on a fair basis with France, even after sending an embassy composed of Doctor Judd, Alexander Liholiho, the heir apparent, and his brother, Lot Kamehameha. After repeated demands by the French Consul, demands which affected the sovereignty of the king, the Islands were placed provisionally under the protection of the United States until relations with France could be bettered. This step soon reduced the French demands to two:



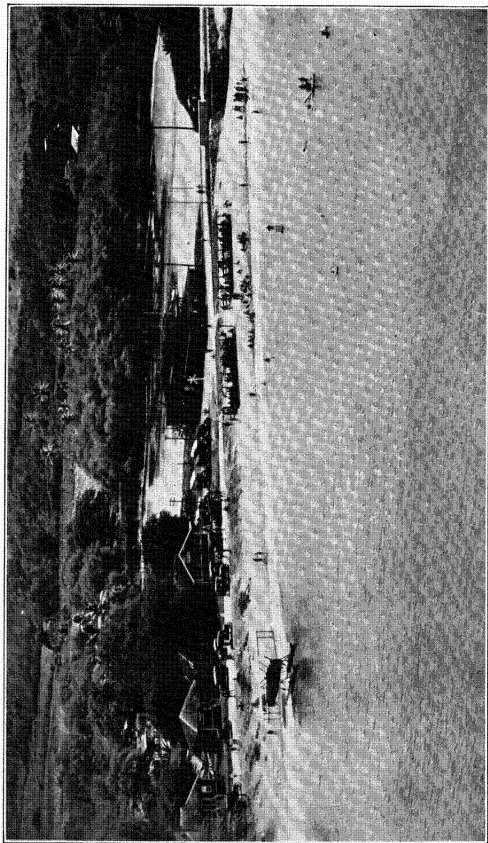
Kailua Beach, windward Oahu, has become one of the most popular vacation resorts, and many cottages are now being built there. The beach is well protected from the large ocean rollers by outlying reefs.



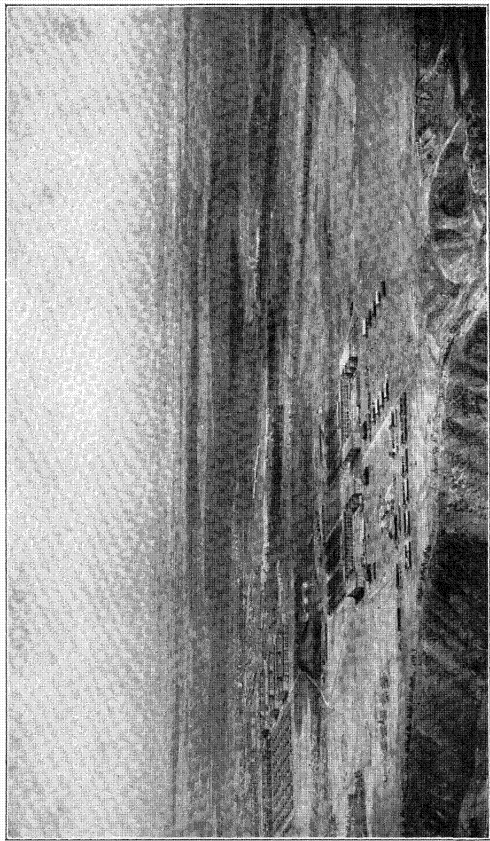
The Nuuanu Pali, Oahu, from the windward side. Looking down through the valley we see part of Honolulu.



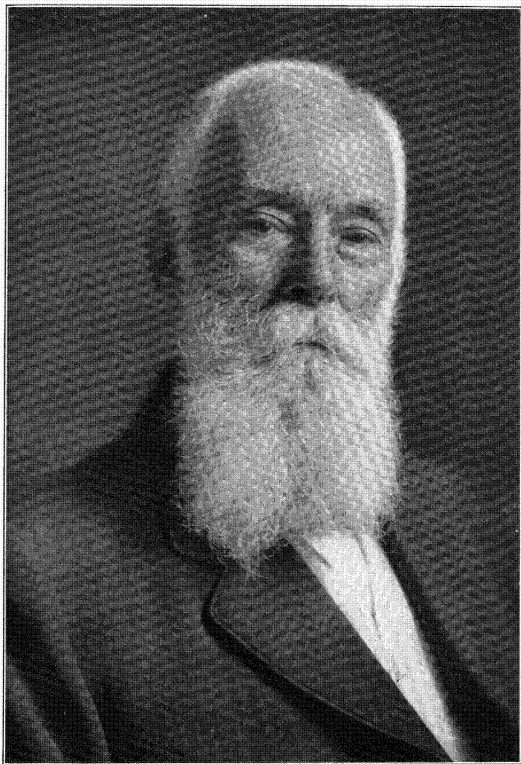
Flying just above the ridge of Koolau Range we see a wide stretch of country before us, extending from the outskirts of Honolulu to Pearl Harbour entrance.



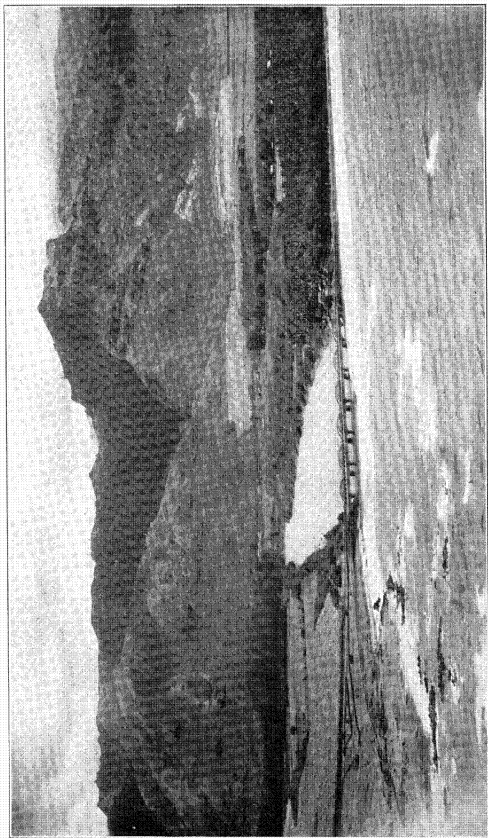
Haleiwa, a beach on windward Oahu, particularly popular with the Army, as it is the nearest beach to Schofield Barracks.



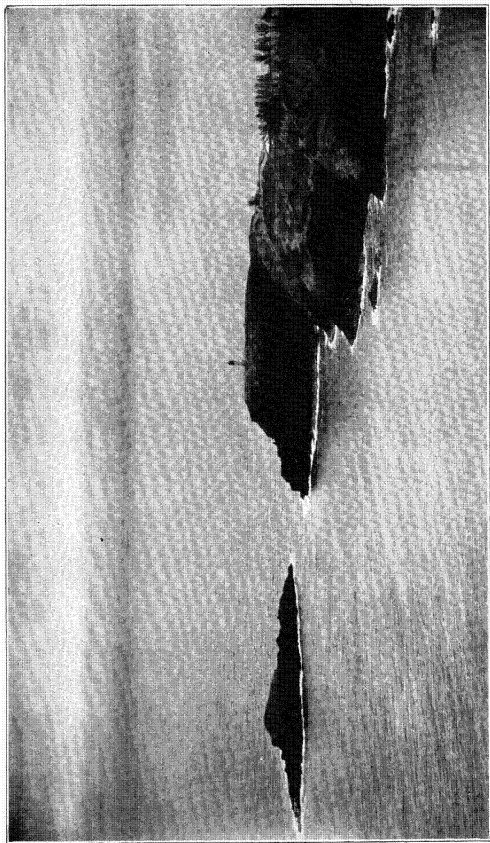
An airscape of Schofield Barracks in which Pearl Harbour may be seen in the centre background. Honolulu is at the extreme upper left.



The Honourable Sandford B. Dole, Associate Justice, Kingdom of Hawaii, President of the Provisional Government, President of the Republic of Hawaii, First Governor of the Territory of Hawaii, U.S.A. Judge Dole resides in Honolulu and takes an active interest in civic affairs.



The Wailua River, one of the many streams which distinguish Kauai from the other islands of the group.



The little island, Mokuauae, farthest north of any of the group. The point on which the lighthouse is maintained is known as Lae o Kilauaea.

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liberty for Catholic worship and freedom for trade in liquor, which points were soon agreed upon.

In 1853, agitation was started for annexation to the United States. The missionaries were opposed to this move, which was sponsored chiefly by the commercial people. The king was rather in favour of the plan as a way out of his many difficulties with foreign nations and as an end to constant conspiracies and troubles at home. By his order, negotiations were entered into, looking to annexation, but his death, which occurred in December, 1854, terminated this. The year 1853 will be remembered also as the year of the terrible epidemic of smallpox, which, entering the territory from San Francisco, spread rapidly among the people, despite every effort to stop it and finally resulted in nearly three thousand deaths. We find the numbers of the Hawaiian race steadily declining, a census taken in December, 1853, showing a loss of more than eleven thousand in three years.

Alexander Liholiho ascended the throne as Kamehameha IV upon the death of his foster father and the next year married Emma Rooke, granddaughter of John Young. Of this union was born a son known as the Prince of Hawaii who it was hoped would continue the Kamehameha dynasty. The young prince died, however, at four years of age, a sorrow from which the king never recovered. The reign of Kamehameha IV was short, as he died in November, 1863. His reign was noted for improvements in agriculture and development of Honolulu harbour for the introduction of steam navigation. His queen will

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long be remembered for her endowment of Queen's Hospital.

Prince Lot succeeded his brother as king. Having served in various capacities in the government of Kamehameha III, he brought experience and considerable ability to his new work. Through his personal influence he brought into existence by legislative means a new constitution. This constitution made a few important changes, such as requiring the holding of some property and the ability to read and write as a qualification of voting; the abolition of the office of *kuhina nui* or vice-king, and other changes in the composition of the legislature. He retained the services of able men as councillors. Immigration began to be handled intelligently, and as leprosy, which made its first appearance in 1853, was beginning to make serious inroads on the people, all lepers were segregated and an isolated peninsula on Molokai, Kalaupapa, was set aside for their use. This settlement is still in use, and here these unfortunates receive the best of care and attention.

During the reign of Kamehameha IV further improvements were made in the school system, in agriculture and trade, and in many public buildings and works. The king died in December, 1872, after a reign of nine years without having appointed a successor. With him the Kamehameha dynasty ended.

Lunalilo, the choice of the people and one of the highest of the remaining chiefs, was elected king. After showing a great promise in the first few months of his reign, he was taken sick and finally died of con-

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sumption, after scarcely more than a year as king. David Kalakaua was elected his successor.

This election resulted in a riot by the partisans of Queen Dowager Emma, whom they wished to have in supreme authority. It was soon suppressed, however. Kalakaua proved a worthy king, choosing wise ministers, and indicating his desire for the betterment of the country by eagerly accepting an invitation to visit the United States the same year he was inaugurated. From this visit he derived great benefit, and it was doubtless largely due to it that the following year a very beneficial treaty of reciprocity was ratified with the United States, thus opening several new industries and starting an era of unexampled prosperity. As a continuation of his policy of acquiring knowledge at first hand, Kalakaua toured the world in 1881 chiefly for the purpose of studying the subject of immigration. He was everywhere greeted courteously and well entertained.

While he was absent on this trip smallpox again broke out in the Islands and though by rigid quarantine it was confined to the vicinity of Honolulu, it reduced the population by two hundred and eighty-two deaths in seven months. In 1886, the most destructive fire in the history of the Islands reduced Honolulu's "Chinatown" to ashes with a property loss of \$1,500,000.

Kalakaua's reign, though accomplishing great things, was not without considerable contention. His plan was to centralize power in his own hands. This was against the wishes of those who preferred

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government by legislature to government by the king. The divergence of view culminated in several arbitrary acts by the king and led to revolution in 1887, to which the king, finding himself without support, wisely submitted. He agreed to changes in the constitution which forfeited his prerogative of dismissing the cabinet and stipulated that members of the upper house would henceforth be elected by the people, and that office holders would be ineligible to seats in the legislature. A counter revolution took place two years later with which the king disavowed any connection and which resulted in the loss of seven lives and in many being wounded. It was unsuccessful.

The king, being in failing health again, visited the United States in the fall of 1890. He failed to improve, however, and died there in January, 1891. His reign was distinguished by great progress, much of which was due to the reciprocity treaty with the United States. Under it, the production of rice and sugar increased to eight times their former total. The new palace, now known as the government building, was built; lighthouses and waterworks were constructed; artesian wells drilled; railways started; city tramways built and many other improvements made which show the trend of the Island monarchy toward modern civilization.

The king was succeeded by his sister, who was proclaimed queen under the title of Liliuokalani. Almost at once she attempted to inaugurate the old system of personal government. Despite the fact

HISTORY—CONTINUED

that she had sworn to uphold the constitution, she drew up a new one and planned to proclaim it as her will before an immense crowd of her sympathizers. She felt safe in doing this, having picked her ministry with the understanding that they would follow her lead. The cabinet balked at giving their consent to this new constitution, however, appealing to the citizenry for support. The queen was obliged to postpone her design, and later, seeing where her policy was leading the country, greatly modified her demands. Her reversion to constitutional methods proved too late, however, as the people had become aroused. After holding a mass meeting and effecting a provisional government, they seized the government buildings and declared the monarchy at an end. The government consisted of an executive council of four presided over by Sanford B. Dole, and was to act only until annexation with the United States could be effected. A treaty of annexation was favourably considered by President Harrison but was defeated by President Cleveland, who soon took office. After investigation, President Cleveland attempted to have the government of Hawaii returned to the queen, but this Mr. Dole and his associates refused to do.

Immediate hope of annexation over, steps were at once taken to establish a republican form of government. A constitutional convention was opened May 30, 1894, and on the 4th of July the Republic of Hawaii was proclaimed, having as its first president Sanford B. Dole. This new government was forced

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to face insurrection in 1895, which, through advance information, was promptly put down. During the latter part of this year, cholera visited the Islands but was promptly isolated and eradicated in one month. This plague, however, accounted for sixty-three lives. In the fall of 1896, a census gave a total population of 109,020, including 39,504 native Hawaiians or part Hawaiians and 13,733 Hawaiian born of other races, including whites and Asiatics. Of foreign born, the Asiatics predominated, owing to their having been brought over in large numbers to extend agriculture. The figures were 22,329 Japanese, 19,382 Chinese, 8,232 Portuguese, and 5,007 other whites combined.

With the inauguration of President McKinley in March, 1897, the annexation treaty was again presented, and after some discussion was finally ratified by both countries, being signed by President McKinley, July, 1898.

The formal transfer of sovereignty was made on August 12, 1898, the new flag being raised on the government buildings with appropriate ceremonies. President Dole was left in charge, awaiting the determination of the final form of government on which a congressional committee was set at work. In April, 1900, an act was passed in the Congress of the United States specifying the government of Hawaii to be that of a territory of the United States and outlining the main governmental features. Sanford B. Dole was appointed by the President as first governor of the Territory of Hawaii, U. S. A.

CHAPTER VIII

THE ARMY AND NAVY ESTABLISHMENTS

THE recent Army and Navy manœuvres in Hawaii focussed as never before the attention of the country on our defensive problems. The phrase "key of the Pacific" is well known to everybody. It takes little imagination to understand that, with Hawaii in the hands of an enemy, our Western seaboard would be subject to attack at any time, for the naval base in Hawaii would furnish the means for a hostile navy to conduct operations against us. With Hawaii definitely and adequately protected, our Western coast can rest secure with a minimum of local protection, as no fleet now existent or contemplated, whether battle ship or air, can jump from the Asiatic continent to the American continent, prepared on arrival to conduct hostile operations. That is why we have a large percentage of our army concentrated at Hawaii, why we have a well supplied naval base here, and why, in the next few years, these defences should be materially strengthened.

"An ounce of prevention is worth a pound of cure" was never so true as in military matters. A democratic nation, well armed, is the best insurance possible for permanent peace. The Air Service in particular should be materially increased in Hawaii.

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Capable as it is of patrolling far to sea, and capable as the army bombers are of inflicting destructive damage on naval vessels, this service should logically equal in strength the rest of the army forces combined. The best protection against modern warfare as applied to the Hawaiian Islands is unquestionably aircraft and submarines, and this protection is by far the cheapest obtainable. Let us not wait too long in supplying it.

Perhaps the reader may wish to know just a little of the forces now stationed in this territory of ours. The average visitor is surprised at the many soldiers and sailors in evidence. In reality, they are not very great in numbers, not nearly so numerous as they should be, but the number here does form a contrast to the army and navy forces on the mainland, which are so scattered throughout the country that they are not apparent to many of the citizens.

From the beginning of Hawaiian history as an American Territory the army has held an important place. It was only a few weeks after the annexation that the first unit arrived, the First New York Volunteer Infantry and the Third Battalion, 2nd U. S. Volunteer Engineers, mobilized because of the Spanish-American War. These units were relieved in April, 1899, by four batteries of the 6th Artillery Regiment of the Regular Army.

The first troops to arrive established Camp McKinley near the present Kapiolani Park, which was in use for several years until the first permanent army post was established at Fort Shafter, in 1907. Fort

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Shafter, present Department Headquarters, is situated on the western outskirts of Honolulu. It has a beautiful parade ground that is enclosed by a drive bordered with royal palms. On the outside of this drive the Department office buildings and the residences of the Commanding General and the Senior Staff Officers are located. Fort Shafter is administered as a separate command, distinct from Department Headquarters.

The largest post on the island and the second largest in point of numbers in the United States Army, known as Schofield Barracks, is located about twenty-five miles from Honolulu on Leilehu Plateau, a thousand feet above sea level. It has some excellent barracks and officers' quarters, although others are needed properly to house the personnel.

On its southern outskirts lies Wheeler Field, home of the Divisional Air Service, represented at present by a single squadron. Though undermanned for the work necessary, the maintaining of a big airdrome with facilities for an Air Service Group, in addition to its regular patrol duties as an observation squadron, this squadron has kept its barracks and surroundings in first-class order and has come to be the show place for visitors to the Barracks. The entire command at Schofield Barracks aggregates 10,000 men.

The Hawaiian Coast Artillery district has in its charge all the fixed defences of the Department, all of which are located on the southern shore. These comprise Forts Weaver and Kamehameha, located on

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either side of Pearl Harbour entrance, eight miles west of Honolulu, Fort Armstrong at Honolulu Harbour, Fort DeRussy near Waikiki, and Fort Ruger behind Diamond Head.

The combatant branch of the Air Service is situated at Luke Field and is known as the 5th Composite Group. The Joint Manœuvres in Hawaii in 1925 brought out in particular the weakness of the Air Service in point of numbers, and recommendations were made for at least twice the number of squadrons now in Hawaii. This would give a Group of Heavy Bombardment, and a Group of Pursuit, each comprising four squadrons, with necessary Service Squadrons in addition. Increase in the Observation Units of the Air Service depends on the use to which they can be put by the arms using them. The need for at least one more Observation Squadron is indicated. Housing facilities in the Air Service are not up to the standard of the other Military Posts, as only one third of the officers assigned can be quartered at Luke Field while two entire squadrons are still living in tents.

The Hawaiian Depot Area has as its headquarters Fort Armstrong, which lies alongside Honolulu Harbour and serves also as a saluting station. Here or near by are located all the various supply depots, with the exception of the Hawaiian Ordnance Depot, which is located near Fort Shafter.

Tripler General Hospital is located directly opposite the entrance of Fort Shafter.

The Headquarters for the 14th Naval District is

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situated at Pearl Harbour. Under it function all the naval activities in Hawaiian waters. The Naval Station is distinct from the District Headquarters though subject to it, and is the command of the "Captain of the Yard." The District Headquarters is the command of a Rear Admiral. The Naval Station is well supplied with excellent machine shops, foundries, electrical shops, and the like, and has one of the most modern dry docks in the world, which was finished in 1917 at a cost of more than five million dollars. Within the "Yard" is situated the main Naval Radio Station.

In addition to the forces of the Regular Establishment, quite a few members of the organized Reserve are listed in the Territory. The National Guard of Hawaii consists of two regiments of Infantry, very much skeletonized. Six companies of each regiment have met the requirements of Federal recognition, and every effort is being made to round out these organizations. With various staff organizations and special troops the total enrolled on April 30, 1925, was eighty-three officers and 1,351 men.

CHAPTER IX

RELIGIOUS DEVELOPMENT

I HAVE in the foregoing pages of history attempted the almost impossible, the separating of the religious or spiritual growth of the Hawaiian Islands from the temporal. In reality, the two phases of development were much interwoven. The best foreign minds in the Islands in early times were the missionaries and other clerics or churchmen. This being the case, it is not surprising that they were called into council occasionally, and later, in the persons of several of their more prominent members, took a dominant part in the king's council of state. Though popular impression is to the contrary, there is apparently little evidence that the missionaries sought political influence and power. They seem to have been a very earnest band, devoted to the task to which they were assigned, of winning the Islands to Christ. It was but natural for a people who were learning Christianity to place confidence in their ministers and to rely on them for temporal advice as well as for spiritual comfort.

The first Christian service recorded in the Islands was held aboard ship in Kealakekua Bay during the second visit of Captain Cook to the Hawaiian Islands, January 28, 1779. This was on the occasion of the

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burial of a sailor. The service used was that from the English Prayer Book, read doubtless by an officer, as no records exist of a chaplain's being aboard Captain Cook's ships. The second recorded service was less than a month later, on Sunday, February 21, 1779, when Captain Cook's remains were, after many threats and persuasions, gathered together as far as possible and given Christian burial.

Great credit is due to Vancouver, the navigator, for the start of Christianity in the Islands. He, a member of the Church of England, during his three visits in 1792, 1793, and 1794, informed the natives of the existence of the true God and promised to try to send them teachers of the Christian religion from England, though in this effort he failed as was explained in another chapter. Then too, the best class of Englishmen early resident here, such men during Vancouver's time as Davis, Young, Boyd, and Howell, more or less casually imparted some early knowledge of Christianity to these people among whom they lived.

Indeed in the whole period between the death of Captain Cook and 1820, before any organized effort at civilizing and Christianizing was made by missionaries, the natives made much progress through the friendly efforts of the resident foreigners. They became more industrious and developed considerable skill in the useful arts, such as blacksmithing, cooperage, carpentry, and tailoring. In all their efforts they were urged on by the will of the king, who, fortunately, saw the value of added knowledge and encouraged it in every way. Contact with white resi-

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dents and transients gradually broke down the ancient belief in idols and in the system of tabu, until finally, in the fall of 1819, as has already been related, Liholiho, the King, on the insistence of Kaa-humanu, declared an end of idolatry and abolished the tabu. It is well to bear in mind that the missionaries were in no way responsible for this advancement which left the Hawaiian people with no belief and consequently in readiness for almost any energetic kind of religious teaching.

The first band of missionaries arrived on the brig *Thaddeus* off the Island of Hawaii, March 31, 1820. This band, which had been sent by the American Board of Foreign Missions, consisted of the Reverend Mr. and Mrs. Hiram Bingham, the Reverend Mr. and Mrs. Asa Thurston, Mr. and Mrs. Samuel Witney, Thomas Holman, physician, and Mrs. Holman, Mr. and Mrs. Daniel Chamberlain and their children, Mr. and Mrs. Samuel Ruggles, Mr. and Mrs. Elisa Loomis, and three Hawaiians who had been studying at the missionary school at Cornwall, Connecticut, Thomas Hopu, William Tenui, and John Honolii. With them was also George Kaula-malii, son of the king of Kauai. Upon the assurance of John Young that these newcomers taught the same religion as Vancouver, they were permitted to land and were granted a year's residence.

The history of the movement which resulted in the arrival of the mission is interesting. The missionary movement started with a group of students at Williams College and led finally to the formation

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of an organization known as the American Board of Foreign Missions supported at first by the Congregational and the Presbyterian denominations. This was in 1810. The first mission sent out went to India in 1812.

In 1809 Obookiah and other Hawaiians had visited New Haven, Connecticut, and interested the churches of New England in the Hawaiian people. This visit was the primary cause of the first mission to Hawaii, eleven years later. England had sent out foreign missions more than twenty years before this, to India and also to Tahiti, but the American Mission was the first systematically to attempt the civilization and christianizing of the Hawaiians. After the first mission others went out from time to time to extend the work throughout the Islands. In the forty years between 1820 and 1860 a total of fifty-nine missionaries were sent.

The missionaries to Hawaii were fortunate indeed in that they had merely to build where a religious edifice had been demolished, with little of the grim struggle against another religion, as was common in most missionary fields at that time. Conditions had been frightful in years past; the sacrifices at the native *heiaus* and the murder of children by their pleasure-loving mothers had materially affected the population of the Islands. Though Kamehameha I made human sacrifices at the dedication of his *heiaus*, we must remember that this had been the custom for ages. Some idea of the progress made in civilization may be gained from the fact that he would not permit

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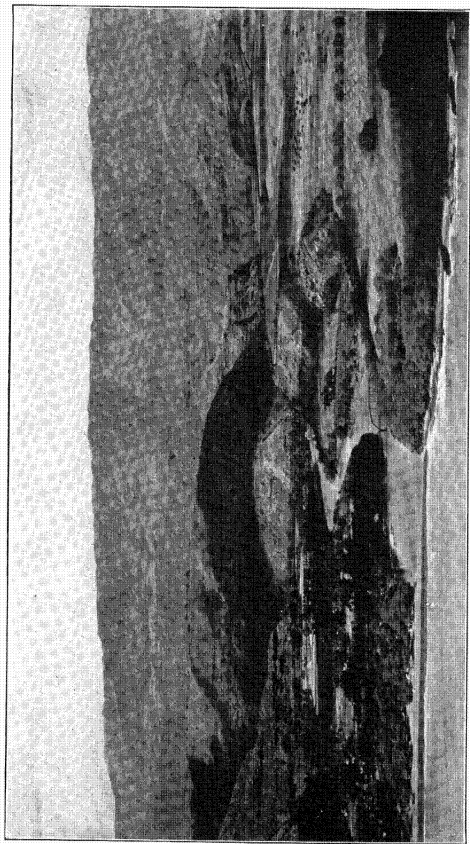
the customary human sacrifices at his approaching death. Mrs. Laura Fish Judd admirably describes the custom of infanticide in her "Sketches of the Hawaiian Islands," published in 1880. The missionary families had called a meeting of women and children where the childless women were asked to explain why they were without children. The following is quoted from these "Sketches":

The scene that followed I can never forget. "Why are you childless?" we inquired. Very few had lost children by a natural death. One woman replied, in tears, holding out her hands: "These must answer the question. I have been the mother of eight children, but with these hands I buried them alive, one after another, that I might follow my pleasures and avoid growing old. Oh, if I had but one of them back again to comfort me now!" She was followed by the others, making the same sad confessions of burying alive, of strangling, of smothering, until sobs and tears filled the house.

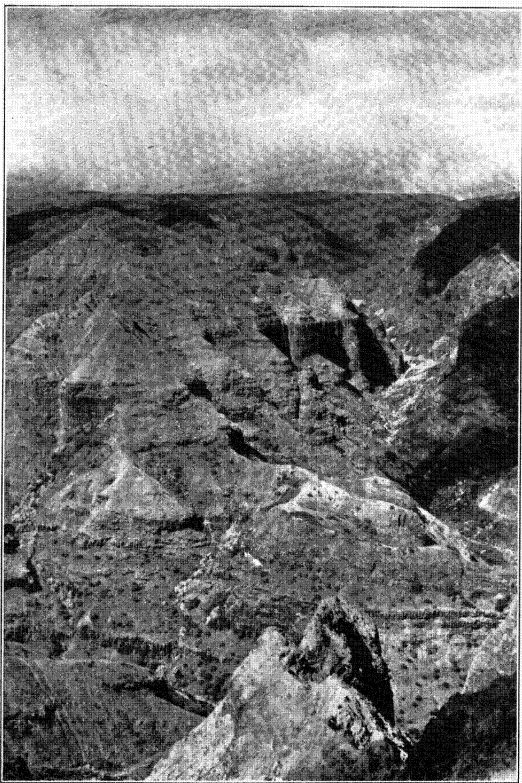
"Oh," said one, "you have little idea of our heartless depravity before we had the word of God. We thought only of preserving our youth and beauty, following the train of our king and chiefs, singing, dancing, and being merry. When old, we expected to be cast aside and to be neglected, to starve and die, and we cared only for the present pleasures. Such was our darkness."

The scene was painful. We tried to say a few words of consolation and advice and to commend them to God in prayer. We made arrangements to meet them regularly once a month for instruction in maternal and domestic duties, and returned to our happy Christian homes feeling that we never before realized how much we owe the Gospel.

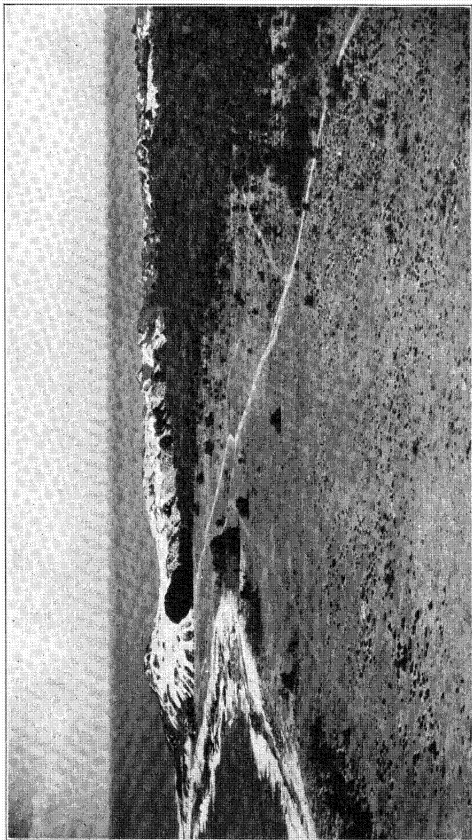
After my return I related to Pali, my native woman, some of the fearful disclosures made at the meeting. "My mother had ten children," said she. "My brother, now with you, and myself, are all that escaped death at her hands. This brother was buried, too, but I loved him very much and determined to save



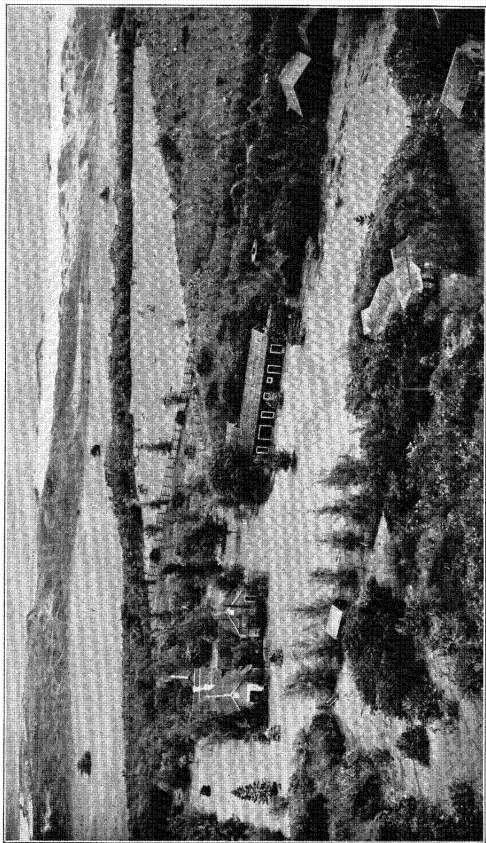
Waimea River, Kauai, which leads to beautiful Waimea Canyon. It was at this point that Captain Cook first stepped on Hawaiian soil.



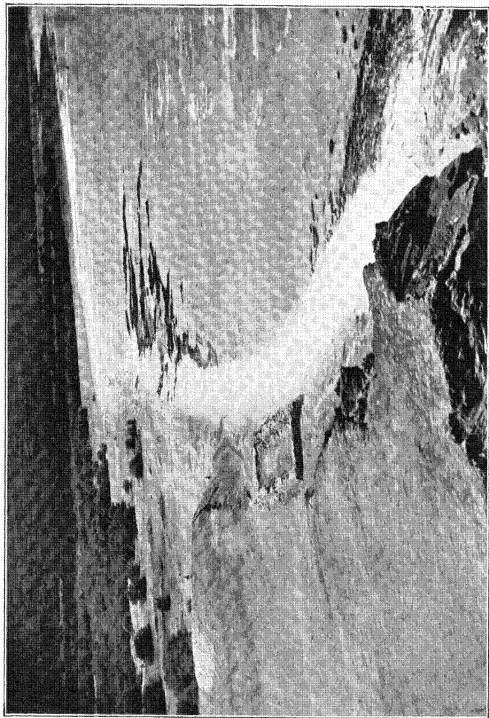
Waimea Canyon, Kauai, one of the most beautiful sights of the Hawaiian Islands.



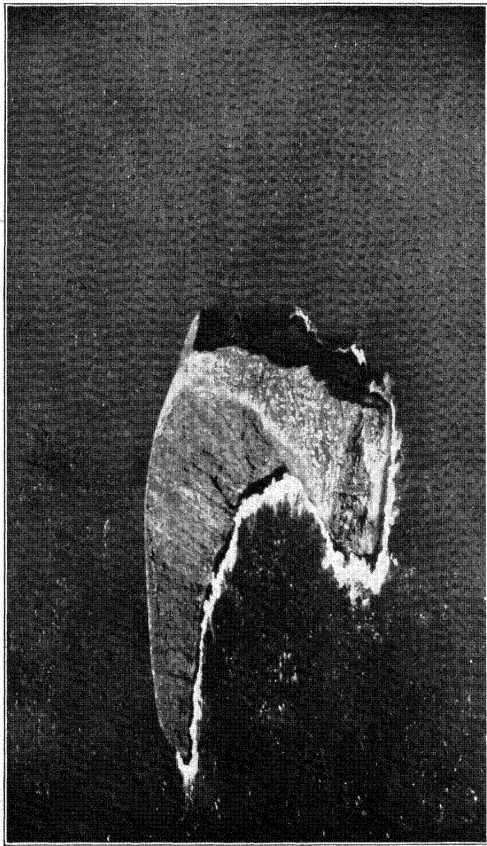
The famous barking sands, large dunes, the sands of which on handling emit a deep "woof, woof."



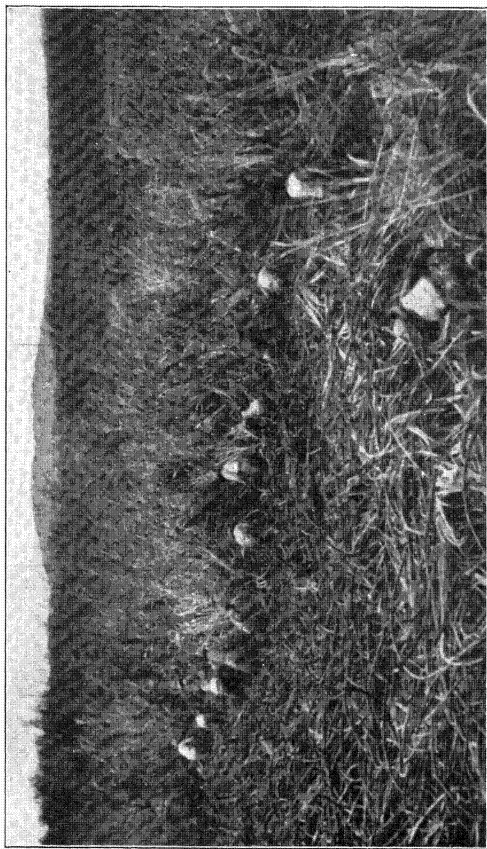
The manager's home at Kiekie, Niihau. This island, private property, is used as a big sheep ranch. The population, except for the resident foreman and a few Oriental servants is entirely native Hawaiian.



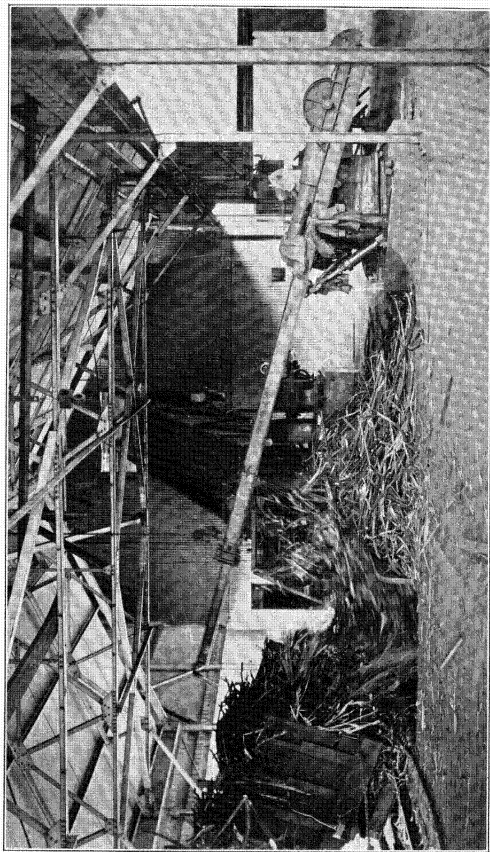
An ancient "city of refuge" on Niikau.



Kaula Rock, eighteen miles across the water from Niuhau, a menace to navigation which the Lighthouse Service plans to cap with a light.



Cutting cane for the mill. No machine has yet been devised capable of supplanting man in harvesting the twisted jungle of sugar cane. A heavy knife like an elongated meat cleaver is used in this work.



A mechanical arm used to drag the cane from the small cars on to the endless chain which feeds it to the roller mills.

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him, if I could. I watched my mother and saw where she buried him. As soon as she went away, I ran and dug him up. He was not dead. I ran away many miles with him, and kept him hid with some friends a long time. My mother heard of us and tried to get us back, but I kept going from one place to another, and after awhile she died. I have always taken care of my brother until now."

The conditions just described were now happily past. The missionaries directed their efforts to learning the language and reducing it to writing and to educating the people in secular as well as religious matters. They instructed them in sex morality, a subject which the natives had no idea existed. Through their influence, too, Hawaiian women were forbidden to visit vessels in harbour. This ruling and the laws which had been promulgated against drunkenness were the cause of much trouble.

The Hawaiians were eager to learn and in general helped the missionaries in every material way. Church buildings were put up as needed and later schools, such as Punahou, were established. Some idea of the difficulties of those days is given by Reverend C. Forbes, one of the early missionaries, in a letter to friends in which he describes the building of a church at Kealakekua. The following is quoted from "The Pilgrims of Hawaii":

In the first place, every stone had to be carried by the church members on their shoulders about an eighth of a mile to the building. This was gratuitous labour. Our lime had then to be obtained in the following manner: The coral was taken from the sea, and as there are no reefs here, it was procured at the bottom in from ten to twenty feet of water by diving down, detaching

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a piece and, if large, ascending to take breath, then descending again with a rope which they made fast and drew up the mass. In this way the canoe was laden and then rowed ashore and the coral piled on the beach. Thus all the limestone was procured. About thirty cubic fathoms in all. It had then to be burned, and for this purpose they had to procure more than forty cords of wood, every stick of which was carried from the mountain (from one to two miles) on the shoulders of the church members.

After the wood was gotten and the lime burned it still had to be taken from the beach up to the building, about a quarter of a mile. This was done by the women in calabashes, each one filling her calabash with lime and carrying it on her shoulder to the building, in all about seven hundred barrels of lime. In like manner they carried fully as much sand and about an equal amount of water, making in all about two thousand barrels of sand, lime, and water carried solely by the women in calabashes. This labour of the female church members was entirely gratuitous besides many contributions in other ways. Then the plates, beams, sills, rafters, and posts, which support the work overhead, joists, lath, etc., were still to be got. This fell on the men, of course, and as we had no cattle to drag large sticks (such animals are not owned by any person who is a member of my church), the male church members divided themselves off into companies, according to the size of the stick to be dragged down, and taking with them ropes, each company selected their stick, going up to the mountain by daylight.

The posts and beams required from forty to sixty men for each stick. Generally they got down the stick by dark after much toil over beds of lava and ravines. The distance was from six to ten miles. In this way all our timbers were obtained. Sometimes I went with them myself to encourage them and found that by the time we reached the place where the timbers were, we had performed quite a fatiguing morning journey, besides being benumbed with cold, being thoroughly wet with the dew on the fern and underwood through which we had to make our way.

Progress in religious instruction was steady, and in 1849, plans for the abandonment of the mission, as such, were discussed. The opinion prevailed, how-

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ever, that the time for abandonment was not yet ripe. It was in 1863, after a visit by Dr. Rufus Anderson, that the decision was finally reached to end the missionary work, missionaries still in Hawaii being urged to establish pastorates, obtaining their support from the people served. This was done, to some extent, though many of the missionaries were of an age entitling them to retirement. Many of the mission churches were turned over to native pastors who had been trained during the past years in local, and in some cases in American, schools. At this time, the total number of men sent to Hawaii with the missions was seventy-five, twenty-eight of whom were laymen, teachers, doctors, and secular agents. Owing to death, retirement, and other losses, the number remaining was now only twenty-eight.

The abandonment of the mission cannot be said to have been beneficial. Without the restraining influence of the missionaries, considerable backsliding was soon evident, the native preachers being unable to command the respect and obedience their predecessors had been accorded. It became an uphill fight. Other denominations had established themselves by this time with the consequent customary squabbles. However, the influx of these various denominations of Protestants, as well as the establishment of the Catholic Church, seems to have advanced scholastic instruction, as each sect had to have its own school. Thus many schools were established, and to-day Hawaii is blessed in this regard.

The younger generation of to-day are little inter-

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ested in the ancient Hawaiian tongue and prefer their church services in English. A compromise is now general in purely Hawaiian churches, part of the service being in Hawaiian and part in English. Hawaiian music is well demonstrated in the churches, some of the most beautiful choral work I have ever enjoyed being the customary practice of local choirs.

With the coming of the Orientals came also the Eastern faiths, so that to-day we have many denominations and many religions. A person could not ask for a better opportunity to look them all over and take his choice.

CHAPTER X

AN AERIAL JOURNEY—COMPLETED

TAKING off bright and early for the island of Kauai across ninety miles of channel, we accomplish the journey in less than an hour, a trip which by boat takes about twelve hours. As we approach Nawiliwili Bay, flanked on the south by a rocky headland, with its background of palms, green-clad slopes, and mountains, we begin to realize why the island bears the title "Garden Isle." It more nearly meets our conception of what a tropical isle ought to be than any of the others to be found in the group.

The reason for this is apparent. Oldest of the islands, geographically, it has lost almost all traces of its volcanic origin. The erosion of the ages has washed down soil from what was once its single mountain, Waialeale, to form broad lowlands, while gigantic fissures, which split the mountain in past ages have been deepened and widened as a result of almost continual rainfall in the uplands until, now, several cañons vie in beauty with famous mainland chasms. As is true of the other islands, we find the north coast, the Napali coast of Kauai of a precipitous formation. It surpasses in beauty, however, any of the island *palis*. In contrast to the other

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islands, we find on Kauai at least six large rivers and many smaller streams. Most of these are navigable for small boats and canoes for a considerable distance. In some of the upland streams mountain trout have been introduced, so that one may vary his sea fishing with a bit of brook fishing at will.

The secret of these many streams lies in the fact that the centre of the island consists of a high and almost impassable bog, a bog which, at an altitude of more than four thousand feet, is fed by the almost continual rainfall which distinguishes this section of the island. Beautiful beaches of the finest sand abound in greater numbers than on any other island. The many attractions which we will soon see make Kauai one of the most interesting islands in the group.

Strangely enough, the citizens of this beautiful island have not apparently been interested in the tourist trade and, while noted for their hospitality, have made little effort to have Kauai placed on the regular itinerary for tourists, with the result that the island is much less visited than others in the group. The little peaceful villages, the many beautiful and isolated beaches, the miles of open country, the mountains, the quiet beauty of it all, give an ensemble which for a rest, a real vacation to tune up the human body and mind for further battles with the busy world, cannot be excelled. As we are still high in the air after our cross-channel flight, we can see for miles in every direction the beautiful plains, the slowly winding rivers, and the blue mountain

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background forming a diversity and beauty of landscape almost too perfect.

We pass over Lihue, the county seat and largest town, and bearing to the left we pass Kīlohana Crater, a small volcanic cone which was thrown up and which spread lava around the countryside long after the island had apparently passed the volcanic era. It is practically the only evidence now visible to the layman of the volcanic origin of the island. The country around is devoted to the sugar industry.

We now have a choice of route in our progress clockwise around the island: We may fly on in our present direction passing through the gap in the Hoary Head Ridge which, with the exception of this break, connects the central mountain section with the coast, where it ends in a promontory. Or we may turn round and follow the coast southward. The latter course seems best, for if we follow it, we are sure not to miss anything of the island's beauty which begins at the water line and extends into the heavenly grandeur of mountainous cumulus clouds that cover the interior and leave us in ignorance of what beauties of mountain peaks they conceal.

Our first little surprise is Kipu Kai, a small pocket in the mountain range, isolated by two ridges either of which can be crossed by a single foot trail. It is a perfect little paradise comprising in remarkably small compass the pleasures of mountain, plain, and sea. This property was acquired years ago by the Rice family, long prominent on the Islands. Waiting for calm weather, they floated lumber ashore to build a

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dwelling, drove a few cattle and sheep over the ridge and left them to multiply, and from time to time made improvements in the little farm until now they have, perhaps, the most unique and pleasant summer home to be found in Kauai.

Passing the promontory of Kawelikoa we again have the plains and the lower slopes of the mountains before us. A few hundred yards from the shore we notice a small pond known as Kapunakea. Opening from this is noticeable a small cave known as Harris Cave, after an early explorer. Though the floor is nearly filled with water, the cave is interesting from the fact that a large opening in the roof gives access to the sky, an opening beautifully fringed with native grasses and shrubs. Flying directly above this opening, we may look down into the cave, its watery floor acting as a perfect mirror.

In the immediate foreground we pass beach after beach of pure white sand bathed by water which as it breaks, sends up showers of jewels. Palm trees fringe the shore backed by deeper vegetation of bananas, *hala*, and evergreen trees. Inland a couple of miles we see the Koloa Reservoir, a muddy body of water used for irrigation purposes over a plain that was once arid but now produces cane as well as any section of the island. The town of Koloa is near by.

The next major attractions are Hanapepe Bay and River, and farther down the coast we come to Makaweli Landing and then Waimea, where the ruins of the old Russian fort may be seen. All are at the ex-

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tremities of gulches which now extend to the sea. Let us travel up Waimea River by plane to inspect the cañon of the same name. The road for automobiles winds up the rim for miles into the interior, and in wet weather is none too safe. From our aerial perch we feel much safer and can see every feature of the cañon to better advantage than the earth-plodder. We swing low over the hills however, so as to get the proper and customary perspective. As the cañon opens up and grows deeper and deeper, and as we notice fall after fall, we realize that we have penetrated to one of the paramount beauties of the Islands. Reds, yellows, browns, and greens blend in a beautiful symphony which appeals to all our senses. Perhaps, after all, it would be better to visit the cañon also by ground travel as I have done, where one can perch on its edge in the absolute stillness, broken only occasionally by some flock of wild goats far down its side as they start miniature rockslides. There one can sit for hours drinking in the beauty of it all, and after a long period of silent appreciation can compare it with other beautiful cañons. For pure beauty, irrespective of size, few gorges are equal to it.

Winging swiftly westward again, we arrive at the Barking Sands, a series of dunes at the western extremity of the island, the sands of which have peculiar properties. As this is one thing we cannot enjoy without closer contact, we glide in and land, an excellent field being available. After coming to rest, we climb out and stretch our rather cramped limbs. The dunes are but a short distance away and at first

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fail to produce the bark. We are rather cynical, anyway, for who ever heard of sand exclaiming, "Bow-wow"? After a bit of coaching by a native, however, we begin to get results. The two hands forced rapidly in and out of the dune, lifting the sand produce a "woof, woof," not unlike a faint bark. The sound is even more noticeable if we climb the dune and have some member of the party drag us down its steep side rapidly by the legs. Then the "woof, woofs" occur in rapid succession.

Across the channel, as we rise again, appears the little island of Niihau, eighteen miles away. Important in ancient times and among the first of the Islands to be used by visiting ships for reprovisioning, it now is seldom visited, as it lies out of the usual steamship routes. This island, six miles wide and eighteen miles long, is now the property of one man, Mr. Aubrey Robinson, and is used as a cattle and sheep ranch. Mr. Robinson, whose residence is on Kauai, visits the small island only occasionally; it is left in charge of a ranch foreman, the only white man on the place. Nearly a hundred and fifty native Hawaiians, the purest racial stock left, perform the ranch labour. In addition to them, two or three Orientals are living there. The island is isolated indeed, being visited by sampan only at one- or two-week intervals when supplies are provided. Every few months, a steamer calls to take off sheep and wool. Ownership of boats on the island is not permitted, and visitors to it are not desired, as there is no place for their accommodation. But by plane we may

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pass over it and so gain the best idea possible of it.

Crossing the island at its southern tip, we come to Kiekie and the manager's home. An excellent landing field exists near the grounds, but as the stock are unaccustomed to airplanes, we sail on down the coast to the west where several other good fields meet the eye. I landed on one of these during my first visit, and seeing some natives near the woods a quarter of a mile away, beckoned to them. They refused to move, and as I walked toward them, they disappeared into the forest. It is not surprising that people who have never seen a railroad train or a trolley car would balk at further acquaintance with an airplane. Near the western extremity of the island an ancient house of refuge is found. Off the end of the island and but a short distance away, an old volcanic cone rises as a semicircle from the sea. This is Lehua, populated by great numbers of sea birds.

Before returning to Kauai let us swing to sea another eighteen miles to view the isolated island known as Kaula Rock. This rock, which the Light-house Service hopes to cap with a light some day, is unapproachable in any but the calmest weather. On the windward side, where it slopes gradually into the ocean, the waves are so rough as to prevent a landing; while on the opposite side, it drops vertically into the sea without giving the possibility of a foothold. The swells on this side are so large that a small boat could hardly avoid being dashed to pieces against the cliff. On my first flight to Kaula, we

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thoroughly examined the rock from the plane in order to study the possibilities of effecting a landing from the air and facilitating matters for the installation of a light. No plan for carrying through the project was found feasible, however, though it would be quite possible to land men and supplies from a small dirigible or blimp.

After our thirty-six-mile flight back to Kauai we start northeastward up the Napali coast, along some of the most beautiful scenery to be found anywhere in the whole Territory of Hawaii. Here are cliffs running straight up from the water to more than two thousand feet, adorned here and there by waterfalls; and valleys, cut deep into the mountains, isolated, uninhabited, and yet well capable of sustaining life. All is green with vivid vegetation, except for the outcropping of old volcanic rocks which lift into the sky pinnacles of gray, yellow, purple, orange, and black that at their tips have been worn down during past ages to a feather thinness.

It takes but a short time to fly over the precipitous part of the coast, and passing beyond a final rocky buttress, we are again in the region of beautiful rivers and beaches. Even lovelier than the south shore is the country now before us. Below and to our right are caves which we shall explore later. Ahead of us is glorious Hanalei Bay, horseshoe shaped and cut near one extremity by the mouth of the Hanalei River, which winds slowly from the mountains through acres of rice. Far back in the valley, the mountains loom sharply, and on their steep slopes tiny waterfalls,

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tumbling from old water grooves, fall sheer for hundreds of feet until the wind breaks each thin stream into mist.

Just beyond the bay lies an excellent natural landing field, property of the Princeville Plantation Company, where we alight and for a time continue our explorations aground. We motor back up the coast whence we have just come, to the sharp drop which constitutes the eastern boundary of Hanalei Valley. Here, the beauty, which we now have more leisure to contemplate, impresses us anew. Following the road westward, we cross Lumahai and Wainiha rivers and come again to the region of the caves.

There are several caves in this vicinity, the first being known as the dry cave. It is a great hole extending far into the mountain, which we can penetrate to a considerable distance with the car and so have the advantage of plenty of light. It has no particular distinction and does not compare with a limestone cavern in beauty. Many legends concerning it remain, however, though that is true of nearly all places in the Islands. A mile or so farther on and higher up the cliffs, a large opening leads down over a heap of stones to the wet cave, so called for its lake of ice-cold water which, after the warmth of the ocean, is pleasant to swim in. There is something mysterious and somewhat weird about the experience, however. Diving off the rocks at the edge into water so clear that one can see deep down without discovering any bottom, the swimmer notices that the only sound is the slap, slap of the waves of his own making

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as they strike up under the sloping walls. He swims across the pool and finds that the water apparently seals a subterranean chamber which leads, no one knows where. The sky shining down the slope from the entrance high above gives a further sense of isolation. Stories of the finny monsters "from out the vasty deep" come to his mind and he suddenly decides that he knows enough about this particular cave and strikes out for the shore with more vigour than he has heretofore shown.

We return to our 'plane and take our way down the coast, flying by scene after scene of delight. There are Kalihiwai Bay with its pretty river and Lae O Kilauea, just off the point of which lies the most northern "island" in the Hawaiian Group, Mokuaeae a small rock. A lighthouse guards this point. Beyond lies a boulder, with a hole in it, which is said to have been knocked from a distant mountain by the spear of one of the gods. Then come Mokolea Point Kilauea Bay, a favourite bathing place for employees of the Kilauea Sugar Plantation. Shortly after, the beach disappears for a short time, and we look across cliffs to the end of a mountain ridge, an impressive spur, Puu Konanae, the mountain from which the rock just described was hurled by the mighty spear of the ancient Hawaiian god. Numerous other bays indent the shore which is once more edged by sandy beaches. Soon we see below us the town of Kealia with its sugar mill, schools, and hospital and then another small town, Kapaa, also a mill town. Next we notice a large grove of cocoanuts adjoining a

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race track and polo grounds, beyond which is the mouth of the beautiful Wailua River, a stream so enticing that we shall follow it a short distance as it wanders through the hills.

We are now almost back to the town of Lihue, and below us is the long narrow field belonging to the Lihue Dairy which has been set aside for the Air Service. As we have compressed quite a bit of sight-seeing into one day, I recommend that you spend the night in the comfortable Lihue Hotel and return to Honolulu by boat in the morning. As for myself, I think I shall gas up and head for home. The night is clear, and little more than an hour's flight will bring me there. You prefer to come with me? All right; we shall start back presently, and after you cease marvelling at the beauty of the stars and the distant lights as seen from an airplane at night, you may turn on the cockpit light and peruse the chapter on Hawaiian Industries.

May we have more flights together!

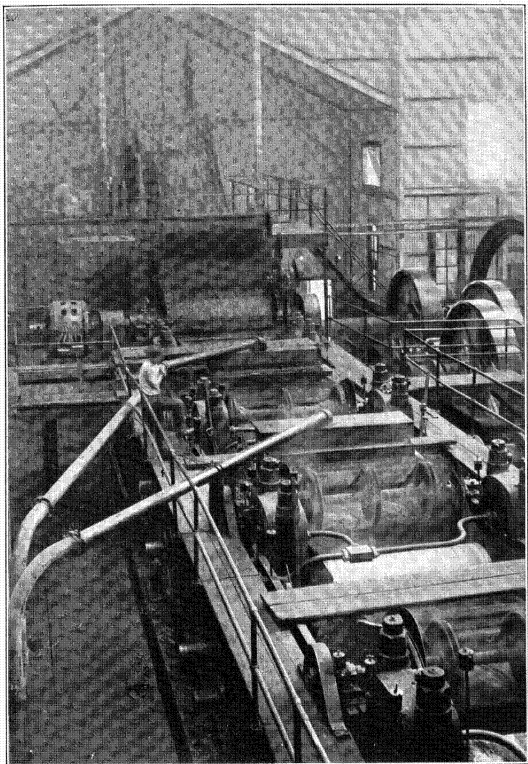
CHAPTER XI

HAWAIIAN INDUSTRIES

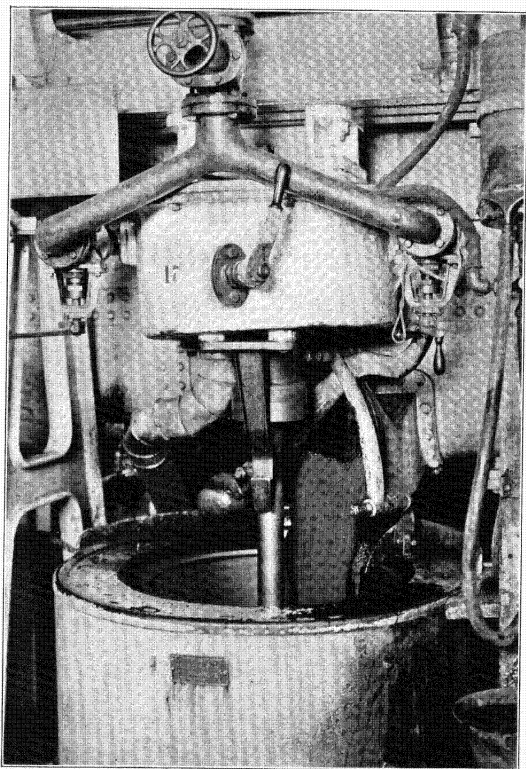
HAWAII'S principal industries, listed in the order of their financial importance, are sugar, pine-apples, tourist trade, coffee, stock ranching, and bananas.

Sugar

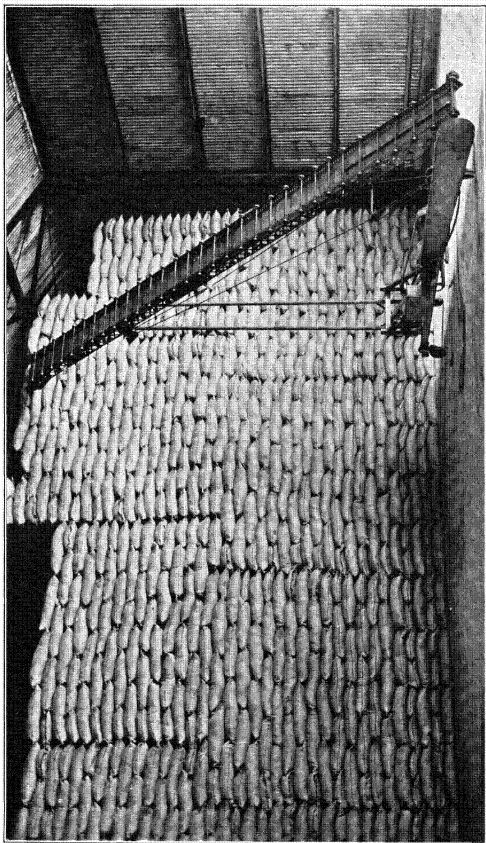
The history of sugar, which may be considered Hawaii's oldest as well as its most important industry is a romantic one. Sugar cane, its origin unknown, was found on the Islands by Captain Cook on his visit in 1778. The first recorded attempt at making sugar is that of a Chinaman who came in 1802, set up a small mill and boiler on the island of Lanai, and harvested and ground one crop, leaving the Islands soon after. The next attempt was made by a Spaniard, Don Francisco de Paula Marin, who, after a residence of twenty-eight years, tried his hand at the work with considerable success. Lavinia, an Italian, made sugar in a crude way, in 1823, by using *poi* pounders and boiling down the juice in a small copper kettle. An Englishman, John Williamson, by name, first cultivated sugar on a large scale. He planted 100 acres of cane in Manoa Valley, Oahu, in 1825. His death in 1827 ended his promising venture.



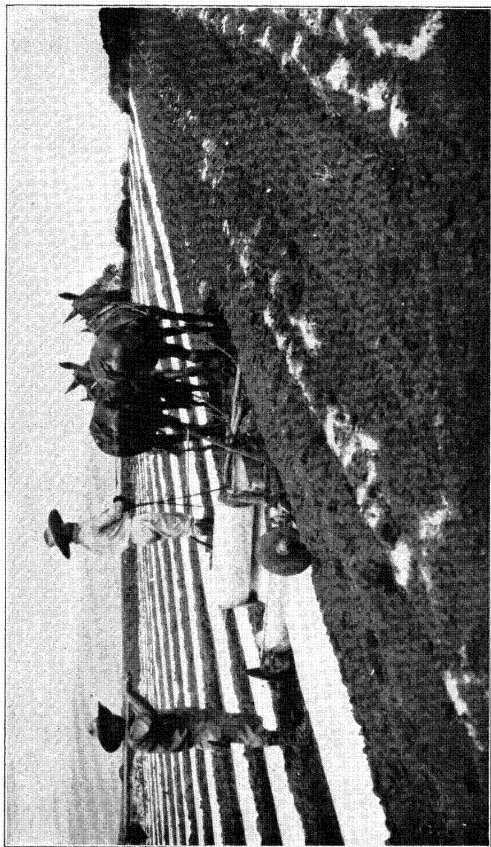
The sugar mill, a series of heavy rollers which squeeze all juice from the cane. The cane which is seen entering the mill in the background emerges perfectly dry at the other end and is fed to the furnaces as fuel.



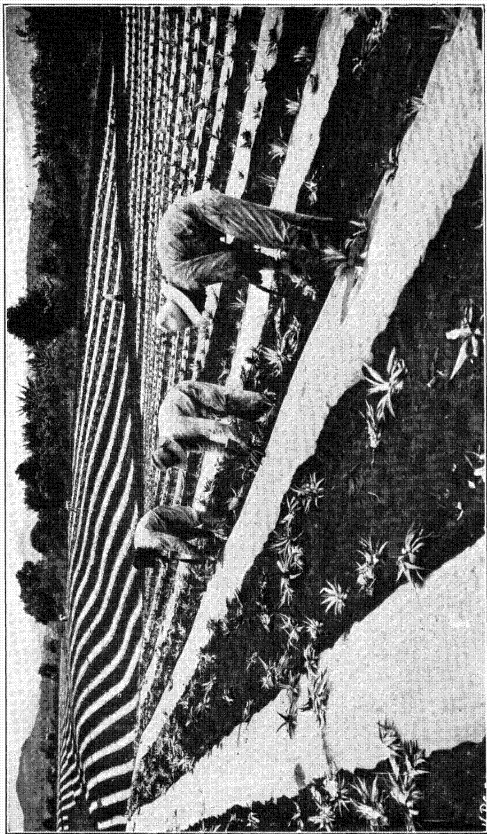
A "Centrifugal" in which the syrup called massecuite heavy with the crystallized sugar is rapidly whirled, the molasses or "black strap" passing out through the sieve-like sides leaving the raw sugar behind.



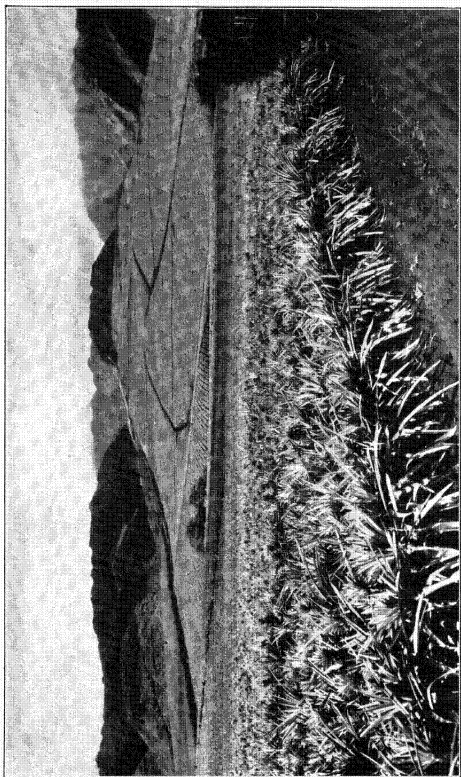
Enough sugar here to season many a cup of Kona coffee. This is but one corner of a single warehouse of one of the many sugar mills.



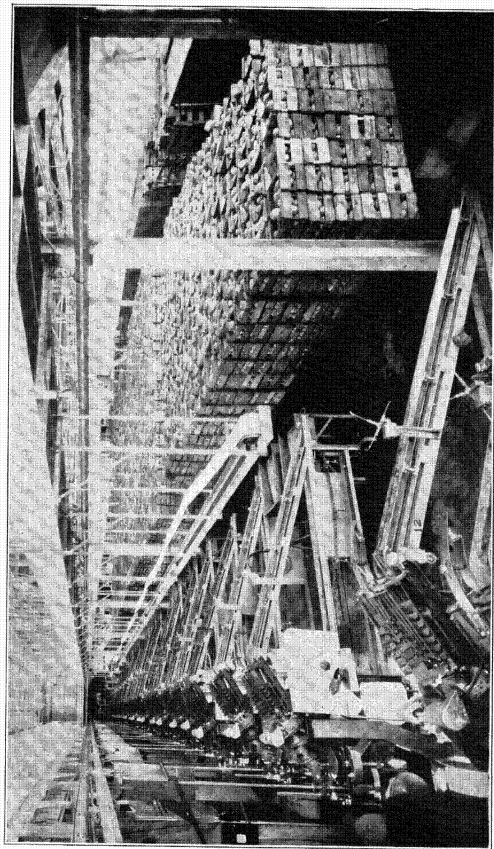
After a thorough ploughing and harrowing the first step in pineapple culture is laying the mulch paper by a very simple horse-drawn machine which covers the edge with dirt holding the paper in place.



The pineapple plants (tops from the last crop) are inserted in regularly spaced holes in the mulch paper and pressed into the earth. The paper holds moisture, prevents weeds, and increases the heat to the plant, thus stimulating growth.



The cultivation of pineapples on a large scale, although of comparatively recent date, now ranks as the second of the territory's industries.



Long rows of Ginaca machines in use. This machine is capable of running automatically at the almost incredible speed of one hundred pineapples a minute, salvaging every bit of fruit from the hull at the same time.



A packing table where the fruit is sliced, graded, and placed in the open cans. From this point every process is handled mechanically, until the tracks carry the crates of canned fruit to the warehouse.

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The first real impulse was given the new industry in 1835, when the American firm of Ladd & Company obtained a grant of land from the king and established a small plantation at Koloa, Kauai. The growth of the industry was slow but steady. It was stimulated greatly by the gold rush to California in 1849 and by the American Civil War in 1861. Its first real boom occurred, however, with the reciprocity treaty between the United States and the Kingdom of Hawaii in 1876 which insured a steady market. From that time to the present, the growth has been continuous. The sugar production for 1925 was 776,072 tons.

A few hours can very profitably be spent in acquiring a knowledge of the sugar industry at first hand. One may well begin by watching the interesting process of preparing one of the immense fields for a planting. Two enormous tractors, instead of being used to drag gang ploughs, as is customary in many large agricultural areas, are used as stationary engines. They are placed at either end of the large field and pull a huge double-gang plough back and forth between them by means of a wire cable which winds on to large drums beneath them. This plough cuts a furrow fully two feet deep, and as it reaches one of the tractors, its ploughshares that are in the ground are swung into the air, the opposite set is dropped down and, as the tractors move ahead a few feet, it heads back across the field.

Quite a bit of irrigation is necessary on most of the canefields. Though rain is almost constantly falling somewhere back in the Koolau range on the island of

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Oahu, out over the Ewa plateau it is often very scarce for weeks at a time. Considerable money has therefore been spent on supplying water, a tunnel in one case having been driven through the mountains to catch the drainage from the more precipitous windward side and pass it through to the plantations.

Although, in a full tropical country, cane matures in a year, in the milder climate of Hawaii the first crop matures eighteen months after planting, the first ratoon crop, grown without further effort, some fourteen months later, and a third crop again in about eighteen months. In some districts, notably in Kauai where water is plentiful and streams bring down fresh soil yearly, cane may grow continuously for for more than ten years before the reduction of sugar content necessitates a replanting. Rotation of crops is not practised here but as often as necessary fertilizer in large quantities is added to the soil.

When harvest time comes, great numbers of labourers must be employed for the cutting as no machine has yet been devised capable of handling the twisted and thickly entwined jungle of cane that is ready for the mill. It is common practice on some plantations to burn the crops before harvesting. The fire, a beautiful sight by night, burns off the leaves, and, although it scorches the stalks, it leaves them free for cutting and makes the harvesting processes so much faster as to compensate for the consequent slight loss in juice. Immediate cutting and grinding are required, for the burned cane soon ferments. Once cut, it is loaded on plantation railways and

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taken to the mills for grinding. In the district of Kohala, Hawaii, the cane is hauled along the public highway on trains of wagons pulled by tractors, much to the detriment of the highways.

At the mill the cane is pulled directly from the small cane cars into a hopper which feeds it to an endless belt. This belt delivers it to the mill proper where it passes between a series of heavy rollers until it is milked of all juice, the refuse coming out at the other end perfectly dry as powder or dust, and is fed directly into the furnaces to supply power for all the mill.

The juice passes first to liming tanks to correct it for acidity. The lime is made locally, from coral. From "limers" the juice goes to heaters which remove the foreign matter by coagulation, after which it passes to the settling tanks and then to the huge evaporators. These reduce the volume 75 per cent. and prepare the juice, now called syrup, for admission into the vacuum pans. In these immense containers, the syrup gradually increases in density until the crystal is formed and built up to a "pan" of uniform sugar crystals, suspended in molasses. The product now is called "massecuite." Still hot, it is poured into centrifugal machines, flowing into the inner basket, the sides of which are perforated. This revolves at high speed, throwing out the molasses and leaving the crude sugar. A very light spray of water clears most of the colour not thrown out immediately, and the remaining sugar goes through chutes to the bagging machine, where it is automatically weighed, 125

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pounds to the bag. Each bag is sewed by machine and passed down another chute to the cars or warehouse. This is the raw sugar which is shipped to the mainland, where it is further refined.

A little extra washing in the "centrifugals" produces a light brown sugar known as wash sugar, which sells locally at less than the white sugar. It has a very pleasant taste and is particularly nice for making candy, as it still tastes slightly of molasses. The molasses thrown out by the centrifugal machines is known as "black strap" and is shipped to the mainland in tankers.

The Waipahu Mill, the largest in the Islands, and the mill in which the majority of my illustrations were taken, has a very large yearly output. The Ewa Mill, also well worth visiting, is said to have obtained the greatest percentage yield, something over 98 per cent. with an average yield of eleven tons of sugar to the acre, or eight and one half tons of cane to one ton of sugar. Only one mill produces refined sugar, the Honolulu Plantation Company Mill, much of their yearly output of 22,000 tons being consumed locally, 10,000 tons being used in one year by the Hawaiian Pineapple Company alone, for syrupeing their canned fruit.

Although some trouble is experienced from time to time with sugar labourers, it seems to be chiefly caused by professional agitators of the imported variety. The working conditions of the labourers, who are mostly Filipinos, are good, the pay and allowances fair and many times better than prevail

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in their native country. The workers have many privileges, such as free hospitals, movies, schools, and the advantages of buying their supplies at near cost in company stores.

The sugar planters of the Territory formed the Hawaiian Sugar Planters' Association and now reap many benefits, one of them being the excellent service of their own experimental laboratory, maintained by the association at an expense of more than a quarter of a million dollars yearly, and commanding the services of expert chemists, biologists, entomologists, foresters, and sugar technologists, the results of whose labours are common property. Through their consistent efforts, new and better types of cane are constantly being developed.

Pineapples

The cultivation of pineapples takes second place in the Territory's industries. Sugar leads with an export value of \$73,886,526, followed by the pineapple industry, with an export value of \$28,292,497 in 1924. This industry is of comparatively recent date, though the fruit has been in table use locally for many years. The fruit as now grown was developed from a plant introduced into the Islands in 1888 by John Kidwell, and known as the Smooth Cayenne. He organized a company in 1891 for the purpose of canning and exporting his product, but the industry made little impression on the mainland. In 1900, James D. Dole, realizing the presence of a big industry in the making, interested local and mainland

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capitalists and a year later formed the Hawaiian Pineapple Company with a capitalization of \$20,000 and a plantation of only twelve acres. To-day this firm alone has an authorized capital of \$9,075,000, and holds for cultivation 107,529 acres, only 17,657 acres of which is leased land. Their dividend, declared in 1924, was \$1,021,802 or 17 per cent. Several other companies were soon formed, and to-day there are fifteen establishments in the Islands, the closest competitor of the Hawaiian Pineapple Company being the California Packing Corporation.

The planting and canning processes are most interesting. New fields are started with slips, with "suckers," or with the crown of the fruit, the best plant coming from the suckers because of their rapid growth. The ground is carefully prepared and covered by row after row of mulch paper, a heavy asphalt-treated product laid by a machine which draws a small layer of dirt over the edges, thus holding the paper in place. Holes are punched through this at regular intervals, and the plants inserted. The paper has two functions: It acts as a preventive against weeds and insects, and it holds the moisture of the ground. It also increases the heat of the ground, promoting a more rapid growth. The plants require from eighteen to twenty months before they are ready for the harvest on the first, or plant, crop. Like the cane, "pines" also have ratoon crops, the second crop being larger than the first owing to the fact that several pineapples grow on each plant. It is customary to replant after the third crop.

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As most of the pineapples ripen at the same time, there is an intense activity in the industry during the months of July and August. To see train after train of the luscious fruit travelling swiftly to the canneries is a sight long to be remembered.

The canning of the pineapple is as interesting as its growth. Visitors are always welcome in the Hawaiian Pineapple Cannery, and it was this concern which I visited, and to whom thanks are due for the excellent pictures illustrating the various processes which take place before the canned fruit is ready for the market. This cannery has the distinction of being, not only the largest Pineapple Cannery, but the largest cannery of any kind in the world. We start our pilgrimage on an elevated walk built near the ceiling for the express purpose of handling visitors conveniently, showing everything and at the same time keeping them where they will not interfere with the work. We pass over a long line of open freight cars, piled high with crates of pineapples, graded for size. These crates are placed near the long row of Ginaca machines, each one of which is adjusted for a certain sized pineapple. Just behind the operators of these machines runs an endless belt on which pineapples too small for one machine are placed and carried down the line to be removed by an attendant at a machine fitted for them.

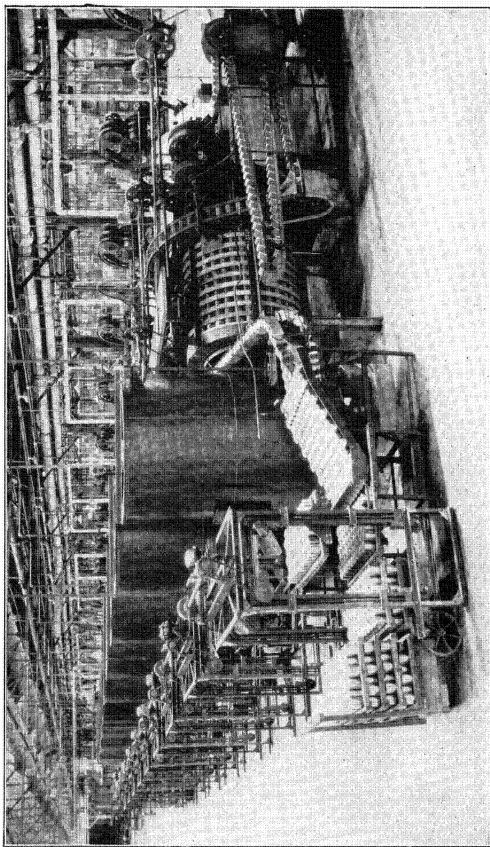
The Ginaca machine which accomplishes the first process of pineapple canning is a very ingenious invention, that has revolutionized the industry, and makes possible the canning of the immense quantity

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of the fruit now done in two short months. The attendant puts the pineapple on an endless belt conveyor studded with cogs which guides it into the centring device where it is placed in correct position for sizing. A revolving cylindrical knife then cuts it into a cylinder of the proper size, which is dropped into a vertical turret where the two ends are cut off and where a plunging knife removes the core. The fruit then passes through a chute to another room to come out on a long movable belt of pure white rubber where lines of girls dressed in spotless white and wearing rubber gloves await it.

The outer husk, in the meantime, from which the fruit cylinder has been cut, still contains a quantity of good fruit. This shell is split by the Ginaca machine and engaged by concave spiked rollers that carry it over grids beneath which are located cylindrical knives. They recover the remaining edible portion which passes by chute to an inspector from whom it is carried by conveyor to the jam department, where, after a second inspection, it is cooked and canned. The latest model in this machine is capable of operating at a speed of 100 pineapples a minute.

To return again to the fruit cylinders which we left in the hands of white-clad girls. They are the trimmers whose duty it is to clip the edges of any shell remaining. From them the pineapples go into the slicing machine, where, after being cleaned by a fine spray of water, they are cut into equal circular pieces. Then, still in cylindrical form, they pass on down the



The last few steps in preparing the fruit, the cans passing rapidly through vacuum machines, syringers, ovens, sealing machines, and lacquering machines, after which only labeling remains before the fruit is ready for shipment.

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moving table, to the packers. The girls nearest the machine select and can the fancy or first-grade slices, the girls near the middle take those not quite so perfect, and the girls at the end can the broken pieces. Bits of pineapple not selected during this journey fall into a conveyer and are carried to another department for conversion into a product known as "confectioners crushed." It is interesting to note that even the cores are used, being sliced and shipped to Eastern confectioners where they are put through a glaze and chocolate dipping process.

The filled cans now pass to the exhausters where the air cells in the fruit are ruptured. They then go mechanically to the syruping machine, receive their syrup, and continue to the exhaust box, where the fruit is heated prior to the seaming or closing of the cans. It is in this box that the cans are again placed under vacuum, after which the covers are seamed on and the closed cans passed through a lacquering machine, then to a cooker, and at last to the labelling machine. This machine is ingenious. By a system of small brushes it attaches the labels to the cans as they roll along. The cans, now ready for the market, are placed in stacks and sent to the warehouse by electric trucks which drag miniature wagon trains.

The parts of the pineapple unfit for other use go to a roller sugar mill, where all juice is extracted; the resulting pineapple bran is sold for cattle food.

Adjoining the Hawaiian Pineapple Company is the American Can Company. A moving conveyer connects the two buildings, and when an order of cans is

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needed, they begin to arrive within a few minutes by this movable belt.

Tourists

The third industry, if it can be called such, is the tourist trade. At least, the tourist trade is considered to hold third place in the money it brings to the Territory every year. This trade, owing to the unceasing efforts of the Hawaiian Tourist Bureau under the expert management of Mr. George T. Armitage in telling the world about Hawaii, is constantly increasing. The prediction is freely made that before many years a wealthy family with headquarters anywhere on the mainland will be very much out of fashion unless they have also a Hawaiian home. Some day, in the none too distant future, we may hope to see the beautiful hills of the Koolau range dotted with villas. Hawaii is destined to serve America as the French Riviera serves Europe, as a place primarily for vacationing. Surely no better can be found the world over.

Coffee

Coffee, which ranks fourth in island produce, exports to the total of \$430,897. This does not represent in any way the amount raised, as it is used almost universally in the islands. The best of the coffee is raised in Kona on the island of Hawaii, and, if properly prepared, excels any coffee I ever tasted. It grows almost without cultivation among the *aa* lava on the leeward coast of Hawaii. Somehow, the

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roots dig down through this terrible rough clinker formation and find nourishment, and the plant grows, undisturbed by weeds.

Other Industries

Next in order of importance after coffee comes stock ranching, followed closely by banana growing, which in turn is followed by fish canning. The export figures respectively for 1924 were \$270,209, \$211,343, and \$135,943. Rice, once an item of considerable importance, has sunk to the low figure of \$11,390, though there is a considerable quantity raised for local consumption. The Japanese, for some reason, do not like the local rice which is raised by the Chinese and import rice from Japan at an extra cost of more than a cent a pound—a big item considering the quantities used. Ranching in the Islands is covered rather fully in the description of the largest ranch early in the book. Bananas seem to be a coming industry. There is ample room for their cultivation here on ground unsuitable for other crops, and nothing is lacking save a little educating of the mainland folks in the superiority of the Hawaiian banana over the other varieties, something which should be easy.

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APPENDICES

I

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II

VOCABULARY

The following Hawaiian words are used customarily throughout the Islands. (Notes on language at end of this section.)

Ae: Yes.

Alanui: Road, street.

Aloha: Used as a greeting, meaning literally, love to you.

Also used in parting with the additional word *Oe*.

Aole: No.

Hale: House.

Halekula: Schoolhouse.

Halepule: Church.

Hanahana: Work.

Haole: Foreigner, now customarily used to designate a member of the white race.

Heiau: Hawaiian temple.

Hikie: Large, low couch.

Hukilau: Catching a school of fish near the beach with a long net—everyone turns out to help when school is sighted.

Hula: The native dance.

Kahuna: Medicine man or native priest.

Kai: Sea.

Kamaaina: Old-time resident.

Kamailio: Talk.

Kanaka: Man, used now to designate the native Hawaiian.

Keikikane: Boy.

VOCABULARY

Keikimahini: Girl.

Ko: Sugar.

Kokua: To help.

Kona Wind: Kona, a district on leeward Hawaii, hence a *kona* wind is one from that direction or contrary to the usual trades. This wind was thought by the ancient Hawaiians to bring sickness.

Kulikuli: Keep still.

Lanai: Porch or piazza, customarily screened and used as a living room.

Lei: Wreath, used as a token of affection in greeting or bidding friends farewell—should be kept, never thrown back to dock.

Luau: Native feast, somewhat similar to a barbecue, except for the foods used.

Makai: Toward the sea.

Make: Dead.

Malihini: Stranger, newcomer.

Mauka: Toward the mountains.

Mele: Hawaiian song or chant in which the valiant deeds of Gods or chiefs were told.

Okolehau or *Oke*: A native-made whisky.

Palaoa: Bread.

Pali: Cliff, precipice.

Pau: Finished.

Pehea Oe: How are you?

Pilikia: Trouble.

Poi: Native food prepared from taro root.

Wahini: Woman.

Wai: Water.

Wikiwiki: Hurry.

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NOTES

The language has only twelve letters: *a, e, i, o, u, h, k, l, m, n, p, w*. *T* is often substituted for *K*, old books giving *taro* as *karo* and *ti* as *ki*. *W* between vowels usually is pronounced as *v*. The pronunciation is after the Latin or Italian. Each vowel is pronounced separately except for the diphthongs *ai* and *au* which are pronounced as in the English words *pie* and *cow* respectively. The accent is usually on the penult, as *Ha-wai-i*.

The language is very inaccurate, as one word may have many meanings, depending on the inflection used. For this reason, partly, the language is rapidly being lost.

III

STATISTICS

LOCATION

The Hawaiian Islands extend for 1,600 miles from northwest to southeast, the principal islands being located between $154^{\circ} 40'$ and 162° west longitude, and between 19° and 23° north latitude—just below the Tropic of Cancer. They are in the direct line of all trans-Pacific travel.

DISTANCES

The following distances are given from Honolulu:

Apia, Samoa.....	2,240	San Diego.....	2,260
Auckland, N. Z.....	3,850	San Francisco.....	2,100
Cape Horn.....	6,488	Seattle.....	2,401
Caroline Islands.....	2,600	Sitka, Alaska.....	2,395
Guam.....	3,337	Suva, Fiji.....	2,736
Hongkong.....	4,961	Sydney.....	4,424
Los Angeles.....	2,332	Tahiti.....	2,389
Manila.....	4,778	Valparaiso.....	5,916
Pago Pago, Samoa.....	2,263	Victoria, Van.....	2,343
Panama.....	4,665	Vladivostok.....	3,721
Portland.....	2,318	Yokohama.....	3,445

AREA

Hawaii Co., 4,015 square miles; Maui Co. (includes islands of Maui, Molokai, Lanai, and Kahoolawe, except for leper settlement), 1,182 square miles; Oahu, 600 square miles; Kauai (including Niihau), 641 square miles; Kalawao (leper colony), 11 square miles. Total

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area T. H., 6,449 square miles. This includes only the inhabited islands. The other islands in the long chain are: Ocean, Midway, Hermes Reef, Lisinsky, Laysan, Mary Reef, Dowsetts Reef, Gardiner, Two Brothers Reef, French Frigate Shoals, Neckar, Frost Shoal, Nihoa, Moro, Gambier Bank, Johnson, Palmyra, Lehua, Kaula Rock, Molokini, and others.

CLIMATE

Balmy, cool, and of slight variation—no fog; no sunstroke. The northeast trade winds and ocean currents from same direction are responsible for mild climate. The mercury soars to 90 degrees seldom and never has reached 100. Honolulu ranges from 60 degrees to 85 degrees, with a usual temperature of 74 degrees. The average daily range is 10 degrees. The average annual rainfall for Honolulu is 28.31 inches. The rainy season is between November and February, though even at this season rain is seldom an inconvenience. The rainfall at Hilo is considerably greater, averaging about 150 inches, while in the uplands of Kauai the rain is almost continuous, and it is said to be one of the rainiest sections in the world. Climate in the Islands may be varied at will by one's using the mountains, for the temperature drops rapidly on ascending to higher elevations.

METEOROLOGICAL DATA

Average Monthly Water Temperature at Waikiki Beach, Honolulu

	1924		1924
Jan.	70.6	July.	80.1
Feb.	72.0	Aug.	81.0
Mar.	76.4	Sept.	80.8
Apr.	77.1	Oct.	79.7
May.	79.6	Nov.	79.6
June.	80.4	Dec.	77.5

STATISTICS

Monthly Average Air Temperatures, Honolulu

	1924		1924
Jan.	70.6	July.	77.0
Feb.	72.0	Aug.	77.6
Mar.	71.7	Sept.	78.0
Apr.	72.6	Oct.	76.9
May.	74.7	Nov.	74.6
June.	76.2	Dec.	73.4

Monthly Rainfall, Honolulu, 1924

	Inches		Inches
Jan.	0.12	July.	1.67
Feb.	1.47	Aug.	0.77
Mar.	1.29	Sept.	0.34
Apr.	12.65	Oct.	1.84
May.	0.58	Nov.	1.06
June.	0.60	Dec.	3.92
Year.	26.31		

POPULATION

The following estimate is given in the Governor's Annual report for 1925:

<i>Racial Antecedents*</i>	<i>Population</i>	<i>Birth Rate</i>
American, British, German, Russian.	35,880.	13.11
Chinese.	24,851.	33.91
Filipino.	49,335.	40.61
Hawaiian.	21,145.	27.73
Japanese.	128,068.	48.82
Korean.	5,956.	41.28
Asiatic Hawaiian.	8,345.	75.74
Caucasian Hawaiian.	13,837.	65.55
Portuguese.	27,470.	40.03
Porto Rican.	6,382.	49.49
Spanish.	1,946.	38.62
All others.	430.	52.63
TOTAL.	323,645	

*This racial classification should not be confused with nationality. Of the 323,645 Total population, 202,165 are citizens of the United States.

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Population by Localities, 1925

Honolulu.	101,500
Oahu (outside Honolulu).	64,300
Hilo.	11,750
Hawaii (outside Hilo).	64,740
Kalawao.	590
Kauai (incl. Niihau).	33,320
Maui (incl. Molokai, Lanai, Kahoolawe)	45,445
<hr/>	
TOTAL.	323,645

SCHOOLS

Public schools in 1925, 175; 1,719 teachers; 55,044 pupils.
 Private schools care for 9,872 pupils. In 1925 the pupils in Public Schools were divided among the following nationalities:

Hawaiian.	3,375
Part Hawaiian.	5,593
Anglo-Saxon.	1,816
Spanish.	315
Portuguese.	5,704
Japanese.	28,363
Chinese.	5,273
Porto Rican.	1,043
Korean.	1,032
Filipino.	1,945
Others.	582
<hr/>	
TOTAL.	55,044

RESOURCES, 1925

Assessed valuation, Territory.	\$360,832,895
Assessed value of real estate.	229,715,291
Assessed value of personal property.	131,117,604
Assessed value, Honolulu and Oahu.	214,275,164
Assessed value, Honolulu realty.	136,199,992

STATISTICS

Assessed value, Honolulu personalty.....	78,075,172
Corporate-owned property in Territory.	247,772,132
Individually owned property in Territory.	103,060,763
Amount Insurance written.	261,185,703
Corporations (1,080 Domestic) are capitalized at	260,871,298
Sugar exports for 1924, pounds.....	1,353,120,785
Value sugar exports, 1925.....	71,468,150
Value exports pineapple products and other fruit	
1925.....	27,943,493
Total value all exports.....	105,559,819
Total value of imports.	81,802,547
Amount of Public Debt.	17,990,000
Total amount year's Revenue.	14,644,485
Total Federal Income Tax paid (1924).....	4,625,031

TIME

By steamer from San Francisco 5-7 days. By air (soon) 24 hours. Difference in time: Honolulu is $5\frac{1}{2}$ hours behind New York time.

IV

MISCELLANEOUS INFORMATION

SPECIMEN TRIP TO HAWAII

From Pacific Coast

The minimum time in which a round trip to the Hawaiian Islands from the Pacific Coast can be taken is about three weeks, but every effort should be made to spend a much longer time in the Islands. A conservative estimate of all expenses for this minimum trip of three weeks, from the Pacific Coast to and through the Hawaiian Islands and return, is given below.

Steamship fare from Pacific Coast ports to Honolulu and return.	\$220.00
(Fare on intermediate class steamers \$180)	
Round Trip Honolulu to Hilo, Island of Hawaii, including Hawaii National Park, scenic railroad trip along the Hamakua Coast, steamer and auto transportation and hotel accommodation (2½ days).....	53.00
Allowance for hotel accommodations in Honolulu, extras, motor, and rail trips.	77.00
	<hr/>
Estimated total cost of minimum trip.....	\$350.00

From Australia

A similar round trip from Sydney may be made in less than two months for something around \$625 to \$800, including first-class steamer fare, hotel and sight-seeing expenses for a four-weeks stay in Hawaii. The stay may be shorter if desired.

MISCELLANEOUS INFORMATION

From New Zealand

A round trip from Auckland may be made in 6 weeks for something around \$450 to \$625, including first-class steamer fare, hotel and sight-seeing expenses for three weeks in the Islands.

From the Orient

A first-class round trip from Shanghai may be made in less than two months for \$750 (gold), including steamer fare and all expenses for at least a two-weeks' stay in the Hawaiian Islands.

LIVING ACCOMMODATIONS

APARTMENTS—COTTAGES

A free listing service for houses, rooms, and apartments is maintained by the Hawaii Tourist Bureau at its office in Honolulu, through which visitors may locate, without charge, desired accommodations outside of regular hotels.

Furnished cottages, bungalows, and apartments consisting of living room, kitchen, bathroom and one bedroom, \$50 a month upward. Similar accommodations with two bedrooms \$70 a month and up; with three bedrooms \$85 a month and upward.

Furnished rooms in private homes can usually be had for periods of a month or more. Rents for such accommodations are from \$20 to \$35 per month. In case two persons occupy the same room, the rate is a little higher. Room and board in private homes is more difficult to obtain. Prices per person range from \$50 to \$75 per month.

HOTELS

The following are the minimum rates of each hotel. "*Minimum rate*" rooms are limited in number, so accommodations at these prices are not always available.

APPENDICES

ISLAND OF OAHU

<i>Honolulu;</i>	<i>Single room</i>	<i>Single room</i>
<i>Downtown:</i>	<i>and bath</i>	<i>Minimum rate</i>
Young.....	\$4.00....	\$2.50 Room only
Blaisdell.	3.00....	1.50 Room only
Leonard.....	1.50....	1.00 Room only
St. Elmo.....	.....	2.00 Room and Meals
<i>Residential:</i>		
Brookland.	3.00....	2.50 Room and Meals
Colonial.	5.50....	3.00 Room and Meals
Courtland.....	.....	3.50 Room and Meals
Davenport. . . . .	.....	3.50 Room and Meals
Donna.....	.....	3.00 Room and Meals
Macdonald.....	.....	2.50 Room and Meals
Makiki. . . . .	.....	3.00 Room and Meals
Pleasanton.	6.50....	4.50 Room and Meals
Roselawn.	2.50....	2.00 Room and Meals
Vida Villa.....	.....	2.50 Room and Meals
<i>Beach:</i>		
Gray's.....	5.50....	4.50 Room and Meals
Halekulani.	5.00....	4.00 Room and Meals
Louidor. . . . .	.....	2.50 Room and Meals
Moana.	9.50....	6.00 Room and Meals
Pierpoint. . . . .	.....	3.00 Room and Meals
Roselawn Annex. . . . .	.....	2.50 Room and Meals
Seaside.	6.00....	5.00 Room and Meals
<i>Wahiawa:</i>		
Wahiawa Hotel. . . . .	.....	4.00 Room and Meals
<i>Waiialua:</i>		
Haleiwa.	6.50....	6.00 Room and Meals
<i>Pearl City:</i>		
Palm Lodge. . . . .	.....	4.00 Room and Meals
Pearl City Inn.	5.00....	3.00 Room and Meals

ISLAND OF KAUAI

<i>Lihue:</i>		
Lihue Hotel. . . . .	.....	5.00 Room and Meals
<i>Waimea:</i>		
Waimea Hotel. . . . .	.....	5.00 Room and Meals

MISCELLANEOUS INFORMATION

ISLAND OF MAUI

	<i>Single room and bath</i>	<i>Single room Minimum rate</i>
<i>Wailuku:</i>		
Grand Hotel.	5.50	5.00 Room and Meals
Wailuku Hotel.	5.50	4.75 Room and Meals
<i>Hana:</i>		
Hana Hotel. . . . .	. . . .	2.00 Room only
<i>Lahaina:</i>		
Pioneer Hotel.	2.50	1.50 Room only

ISLAND OF HAWAII

<i>Hilo:</i>		
Hilo Hotel.	7.00	6.00 Room and Meals
Pacific Hotel. . . . .	. . . .	1.50 Room only
<i>Kilauea Volcano:</i>		
Volcano House. . . . .	. . . .	7.50 Room and Meals
<i>Waiohinu:</i>		
Bide-a-wee. . . . .	. . . .	5.00 Room and Meals
<i>Kealahou:</i>		
Kapiolani Bungalows. . . . .	. . . .	3.50 Room and Meals
Mahealani. . . . .	. . . .	5.00 Room and Meals
<i>Kamuela:</i>		
Waimea Hotel.	5.00	3.50 Room and Meals
<i>Kohala:</i>		
Kohala Club. . . . .	. . . .	4.50 Room and Meals
Sunnylawn. . . . .	. . . .	6.00 Room and Meals
<i>Honokaa:</i>		
Honokaa Club. . . . .	. . . .	4.00 Room and Meals
Richard's. . . . .	. . . .	1.50 Room only

INTER-ISLAND DISTANCES AND ONE-WAY FARES

From Honolulu to:

Kauai:

Ahukini, 95 miles

Inter-Island Steam Navigation Co. \$11.00

Matson Navigation Co. 15.00

APPENDICES

Maui:

Lahaina, 72 miles.	
Inter-Island Steam Navigation Co.	10.00
Hawaii Meat Co. Steamer.	7.65
Kahului, 90 miles.	
Inter-Island Steam Navigation Co.	8.35
Los Angeles S. S. Co.	12.50
Matson Navigation Co.	12.50

Molokai:

Kaunakakai, 53 miles.	
Inter-Island Steam Navigation Co.	7.65

Lanai:

Kaunalapau, 59 miles.	
Inter-Island Steam Navigation Co.	7.65

Hawaii:

Hilo, 192 miles.	
Inter-Island Steam Navigation Co.	16.50
(Special 30-day round-trip ticket \$30.00)	
Matson Navigation Co.	20.00
Los Angeles S. S. Co.	20.00
Mahukona, 134 miles.	
Inter-Island Steam Navigation Co.	13.20
Hawaii Meat Co.	13.20
Kawaihae, 144 miles.	
Inter-Island Steam Navigation Co.	13.20
Hawaii Meat Co.	13.20
Kailua, 176 miles.	
Inter-Island Steam Navigation Co.	13.20
Hawaii Meat Co.	13.20
Kealahakua, (Napoopoo) 157 miles.	
Inter-Island Steam Navigation Co.	14.30

NOTE:—Children between the ages of six and twelve are carried for half fare on Inter-Island steamers, under six years of age quarter fare, and children in arms are carried free.

Rail Trip

Trains leave Honolulu for Haleiwa 9:15 A. M. and 3:20 P. M. Returning, leave Haleiwa at 6:05 A. M., 2:52 P. M.,

MISCELLANEOUS INFORMATION

arriving Honolulu 8:32 A. M., and 5:27 P. M. Special trains on Sundays. Regular round trip fare to Haleiwa, \$2.45. Observation car privileges, \$1.00 extra. Week-end rates \$2.25 plus \$1.00 for observation car.

Coral Gardens

There are very interesting Coral Gardens at Haleiwa and Kaneohe that may be seen from glass-bottom boats. The following fares are in effect:

Haleiwa Gardens.....	\$.50 per passenger
Kaneohe Gardens.....	1.00 per passenger

STEAMSHIP INFORMATION

Interchange of Tickets

Passengers from the Orient (except on Dollar Line steamers), Australia, and New Zealand with trans-Pacific transportation, can stop over in Honolulu and exchange the unexpended portion of their tickets for similar accommodations on other steamship lines to the Pacific Coast. These arrangements should be made at the port of departure or not later than the first day at sea.

Trans-Pacific steamers generally remain in Honolulu about 10 hours.

Time of Passage

From San Francisco, 6 days; Los Angeles, 6 days; Vancouver and Victoria, 7 days; Seattle, 8 days; Yokohama, 8 days; Shanghai, 13 days; Hongkong, 17 days; Manila, 20 days; Sydney (direct), 14 days; Auckland, 11 days.

Children's Fares

Under two years of age, 10 per cent. of adult fare. (No berth provided.)

Two to ten years of age, one-half of adult fare.

APPENDICES

MATSON NAVIGATION CO.

Castle & Cooke, Honolulu Agents

San Francisco to Hawaiian Island Ports

The Matson Navigation Co. maintains weekly passenger service between San Francisco and Honolulu. Sailing from both Honolulu and San Francisco every Wednesday.

Seattle to Honolulu, to San Francisco

The Matson Navigation Co. has sailings every five weeks direct from Seattle to Honolulu.

Minimum first-class fares to Honolulu from: San Francisco, \$110 (\$90, S. S. *Manoa*); Seattle, \$90.

The S. S. *Maui* and *Matsonia* proceed to Hilo the Thursday evening following their arrival at Honolulu, returning to Honolulu the following Sunday morning. The S. S. *Wilhelmina* and S. S. *Manoa* continue to Kahului, Maui, the Thursday evening following arrival in Honolulu, returning to Honolulu Sunday morning. The S. S. *Lurline* usually continues on to Port Allen, Kauai, following arrival at Honolulu. Returning to Honolulu prior to sailing to San Francisco.

LOS ANGELES STEAMSHIP CO.

B. F. Dillingham Co., Honolulu Agents

Los Angeles to Hawaiian Island Ports

The Los Angeles S. S. Co. has sailings every two weeks between Los Angeles and Honolulu, sailing every second Saturday from both Honolulu and Los Angeles.

Minimum first-class fares to Honolulu from: Los Angeles, \$110 (\$90, S. S. *Calawaii*).

The S. S. *City of Los Angeles* and S. S. *Calawaii* proceed to Hilo, Hawaii, the Monday morning following arrival at

MISCELLANEOUS INFORMATION

Honolulu, the S. S. *Calawaii* touching at Kahului, Maui, en route. On the return from Hilo the vessels reach Honolulu Thursday morning.

DOLLAR STEAMSHIP CO.

The Dollar S. S. Co. maintains two services out of San Francisco both touching at Honolulu, one the "Around the World Service," the other the Trans-Pacific Service. The combined sailings of these services give a Dollar liner sailing to Honolulu from San Francisco every Saturday.

Minimum first-class fares to Honolulu from: San Francisco, \$125; Yokohama, \$226; Shanghai, \$269; Hongkong, \$300; Manila, \$300.

OCEANIC STEAMSHIP COMPANY

C. Brewer & Co., Honolulu Agents

The Oceanic Steamship Co. has sailings every three weeks in both directions, between San Francisco and Sydney, Australia, via Honolulu, Suva (Fiji), and Pango Pango (Samoa).

Minimum first-class fares to Honolulu from: San Francisco, \$110; Suva, Fiji, \$175; Pango Pango, \$125; Sydney, \$235.

TOYO KISEN KAISHA

The Toyo Kisen Kaisha maintains the following schedule between San Francisco and Oriental ports. Sailings to Honolulu from the Orient and San Francisco about every 14 days. Passengers from San Francisco to the Orient or vice versa are allowed 30 days stop-over at Honolulu.

San Francisco to Japan and China and return

Calling at Honolulu, Yokohama, Kobe, Nagasaki, Darien, Shanghai, Hongkong.

APPENDICES

Minimum first-class fares to Honolulu from: Yokohama, \$226; Shanghai, \$269; Hongkong, \$300; Manila, \$300.

CANADIAN-AUSTRALIAN ROYAL MAIL LINE

Theo. H. Davies & Co., Honolulu Agents

The following schedule is maintained between Vancouver and Victoria, B. C., and Suva, Fiji; Auckland, N. Z., and Sydney, Australia, via Honolulu. Sailings in both directions about every four weeks. Passengers are allowed stop-overs at Honolulu. Through passengers holding transportation to Vancouver, B. C., can stop over at Honolulu and proceed to San Francisco or Los Angeles at little additional cost, as tickets are interchangeable on local lines.

Minimum first-class fares to Honolulu from: Vancouver, B. C., \$110; Suva, Fiji, \$175; Auckland, \$192.50; Sydney, \$235.

AUTOMOBILE DATA

Rates in Honolulu

Standard 7-passenger automobile, \$4 per hour; by the week, \$125 and up. Cars without drivers average \$50 per week.

Freight Rates

San Francisco, Los Angeles, or Seattle to Honolulu, weight or measurement, \$6 per ton. Average automobile 10 cubic tons, \$60. Honolulu to Hilo, Kahului, or Ahukini. Average car such as Buick about \$42.50.

Passengers travelling with own cars are charged one-way freight rate on car for round trip on Inter-Island S. N. Co. steamers.

Regulations for Visitors

Visitors bringing their autos to the Hawaiian Islands are required to register the license number, with the

MISCELLANEOUS INFORMATION

Treasurer of the City and County of Honolulu who will issue a certificate which should be shown by the driver upon request. Complimentary drivers' licenses, issued to visitors, are good for three months, after which time Territory license costs \$5.

(Be sure to bring your driver's license.)

Residents of Canada bringing their own automobiles may have the courtesy of 30 days freedom from the U. S. Customs Department ruling requiring a bond or certified check to cover any duty charges.

SPORTS

Polo, racing, football, September to December. Swimming, surfing, tramping, golf, tennis, motoring, and deep-sea fishing always in season.

Tennis

There are excellent tennis courts throughout the Islands. Tennis tournaments are held at frequent intervals.

Game Fishing

Fishing for tuna, ulua, dolphin, ono, and other game fish all year round. No license required. Power launches or sampans may be rented at various island ports.

Golf

Temporary membership at the Oahu Country Club and golf links (18 holes) costs \$22 for first month and \$16.50 each following month not exceeding five. No greens fee. Caddies available. Courtesy cards good for 10 days may be obtained from members. Greens fee of \$2 per day is charged, or \$1 if with member.

Good nine-hole course at Haleiwa, 32 miles from Honolulu, near Haleiwa Hotel. Greens fee \$2.

APPENDICES

Moanalua golf links (Honolulu Golf Club). Visitors' cards \$5 a month. Single greens fees \$1.

There are also golf courses at the Kilauea Volcano House, Hawaii; Waimea Hotel, Kamuela, Hawaii; Wailua County Park near Lihue, Kauai and on Maui, at Honolulu and Haiku. Visitors are welcome.

Swimming and Surfing

Bathing suit and towel at bath houses on Waikiki Beach, 35c.

Surf boards, 50c. each, per day.

Visitors' cards for the Outrigger Canoe Club, Waikiki, \$1.25 a month for women, and \$2 a month for men.

Surfing in outrigger canoes, \$1 per passenger per hour. Minimum charge \$2.

Saddle Horses

The use of saddle horses can be obtained through the Hawaii Polo and Racing Club.

Tramping

Visitors' cards for the Trail and Mountain Club, \$1 per month. The club conducts hikes and trips to the various points of interest on the island. Your hiking clothes will prove convenient in Hawaii.

Gymnasium Exercise

Visitors in Honolulu who wish to enjoy privileges of the Y. M. C. A. gymnasium can obtain complimentary membership. A fee of \$5 is charged for a 3-months' membership.

Hunting

Duck shooting: October 1 to May 1; Plover: October 1 to May 1. Wild goat and wild pig season open all year. Non-resident hunting license, \$25.

MISCELLANEOUS INFORMATION

HOLIDAYS OBSERVED IN HAWAII

New Year	January 1
Washington's Birthday	February 22
Good Friday .....	.....
Decoration Day	May 30
Kamehameha Day	June 11
American Anniversary	July 4
Labour Day	September (first Monday)
Regatta Day	September (third Saturday)
Armistice Day	November 11
Thanksgiving Day	November (the last Thursday)
Christmas Day	December 25

BRIEF HISTORICAL DATA

Events in Hawaii's History

- 1555—Islands discovered by Juan Gaetano.
- 1557—Spanish ship wrecked at Kona, Hawaii.
- 1778—Islands discovered by Captain Cook.
- 1779—Death of Captain Cook, Kealakekua, Hawaii.
- 1792—Arrival of Captain Vancouver at Kealakekua.
- 1795—Kamehameha I conquered Oahu.
- 1810—Cession of Kauai to Kamehameha.
- 1819—Death of Kamehameha I.
- 1819—Abolition of idolatry.
- 1820—First American missionaries arrived.
- 1820—First whaleship arrived.
- 1827—First Catholic missionaries arrived.
- 1836—First English newspaper: *Sandwich Islands Gazette*.
- 1840—First constitution proclaimed.
- 1842—Recognition of independence by the United States.
- 1843—Provisional cession of Islands to Great Britain.
- 1843—Restoration of independence by Admiral Thomas.
- 1849—Treaty concluded with United States.
- 1851—Protectorate offered to United States.
- 1853—Arrival of Mormon missionaries.
- 1876—Reciprocity treaty with United States.

APPENDICES

- 1881—King Kalakaua toured the world.
- 1887—New constitution proclaimed.
- 1889—Insurrection led by R. W. Wilcox.
- 1891—Death of King Kalakaua in San Francisco.
- 1891—Accession of Queen Liliuokalani.
- 1893—Liliuokalani deposed. Provisional government.
- 1894—Republic of Hawaii established.
- 1895—Insurrection suppressed.
- 1898—American annexation secured.
- 1900—Territorial government begun.
- 1917—Death of Queen Liliuokalani.
- 1919—Opening of Pearl Harbour dry dock.
- 1920—Celebration of Missionary Centennial.
- 1925—Joint Manœuvres, U. S. Fleet and Army in Hawaii.

HAWAIIAN EXECUTIVES

Monarchy

<i>Ruler</i>	<i>Born</i>	<i>Reign</i>
Kamehameha I (The Great).....	1736	1782—1819
Kamehameha II (Liholiho, Kamehameha's son).....	1797	1819—1824
Regency of Kaahumanu (wife of Kamehameha I) and Kalanimoku (minister) ..		1824—1833
Kamehameha III (Kauikeaouli, brother of Liholiho).....	1813	1833—1854
Kamehameha IV (Alexander Liholiho, grandson of Kamehameha I by his wife, Kalakua).....	1834	1854—1863
Kamehameha V (Lot Kamehameha, elder brother of Kamehameha IV, last of Kamehamehas).....	1830	1863—1872
Lunalilo (Elected—his mother was niece of Kamehameha I).....	1832	1873—1874
Kalakaua (Elected from high chiefs).....	1836	1874—1891
Liliuokalani (Kalakaua's sister). Deposed Jan. 17, 1893; died Nov. 11, 1917. ...	1838	1891—1893

MISCELLANEOUS INFORMATION

Provisional Government

	<i>Term</i>
Sanford B. Dole, President.	1893—1894

Republic

Sanford B. Dole, President	1894—1900
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Territory

Sanford B. Dole, Governor	1900—1903
George R. Carter, Governor.	1903—1907
W. F. Frear, Governor.	1907—1913
L. E. Pinkham, Governor.	1913—1917
C. J. McCarthy, Governor.	1917—1921
W. R. Farrington, Governor.	1921—

SHIPPING 1924

<i>Ports</i>	<i>No. of vessels</i>	<i>Gross tonnage</i>
Honolulu, Oahu.	737	5,478,578
Hilo, Hawaii.	118	778,913
Kahului, Maui.	70	427,888
Port Allen, Kauai.	41	215,302
TOTAL.	966	6,899,681

TOURIST FIGURES

The following figures show the number 1st- and 2d-class passengers exclusive of residents of Territory who spent two or more days in the Hawaiian Islands.

1921	1922	1923	1924	1925
8,000	9,876	12,021	12,468	14,500
		145		

APPENDICES

SOME COMMON PRICES

In Honolulu

Gas: 2,000 cu. ft. @ \$2.15 per M.

Light: k. w. hour, 8c.

Milk: 19c. per qt.

Ice: 10 lbs. daily @ 75c. per 100 lbs.

Telephone: Per month, \$4.00.

Street car: 4 tickets for 25c.

Food and clothing prices are slightly higher than those on Pacific Coast. Visitors need not worry about what to bring with them, however. Everything they need or want can be purchased in Hawaii.

In Honolulu a good cook receives from \$40 to \$50 per month, depending on the size of the household. A servant to do housework such as sweeping, cleaning, laundry, and no cooking receives from \$25 to \$35 per month.

CABLE AND RADIO

The Hawaiian Islands are in constant communication with all parts of the world. Very efficient wireless telegraph and cable services keep the visitor in constant touch with his home city. The following are a few cable and radio rates to points bordering on the Pacific:

	<i>Full rate per word</i>	<i>Night letter 13 words</i>
<i>Honolulu to:</i>		
California in general.	\$.29	\$1.90
San Francisco and Bay cities. . .	.25	1.50
Oregon. . . . .	.39	2.00
Washington. . . . .	.39	2.10
British Columbia. . . . .	.33	2.10

MISCELLANEOUS INFORMATION

		<i>No night letter</i>
Australia.....	.83	"
New Zealand.....	.75	"
China.....	.75	"
Japan.....	.60	"

NOTE

Much of the data given in Appendix IV is furnished by courtesy of the Hawaiian Tourist Bureau through its able secretary, Mr. George T. Armitage. The Tourist Bureau will be glad to furnish the latest information on the Islands to those planning a visit. Visitors to Honolulu should stop at the local office of the Bureau on Fort St., where they will be assisted in planning their time in the Islands to the best advantage.

THE END

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Honolulu
Diamond Head
Kalaupapa

TERRITORY OF HAWAII

Scale of Miles

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Lava Flows 1823

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